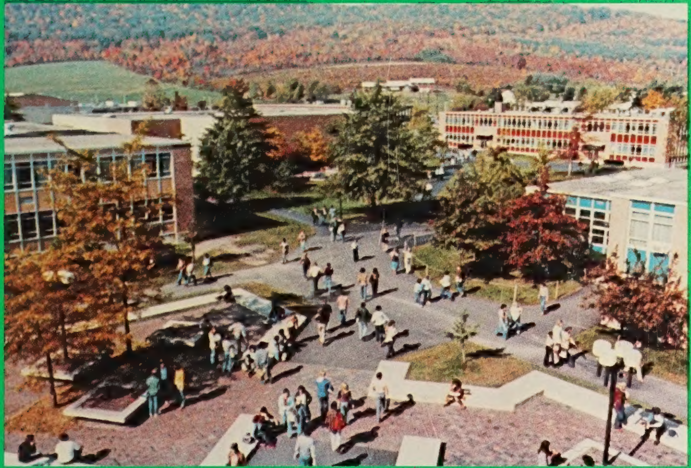


Broome Community College

Catalog 1979-80

ARCHIVES CATALOGS

ACCREDITATION

Broome Community College is a member of the Middle States Association of Colleges and Secondary Schools.

The College is supervised by the State University of New York, and its curriculums are registered by the State Education Department.

The Civil, Chemical, Electrical and Mechanical Technology programs are ECPD-accredited engineering technology curriculums. ECPD is the Engineers Council for Professional Development, a national organization of engineering societies.

The Dental Hygiene program is accredited by the Council on Dental Education of the American Dental Association, and the Nursing curriculum is accredited by the National League of Nursing.

The Council on Medical Education of the American Medical Association (AMA) has accredited three other curriculums—Radiologic Technology, Medical Record Technology and Medical Office Assistant, which is also accredited by the American Association of Medical Assistants. The Medical Record Technology program has double accreditation, too, having been approved by the American Medical Record Association as well as by the AMA.

NON-DISCRIMINATION COMMITMENT

Broome Community College, in compliance with Title VI of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972, does not discriminate on the basis of race, sex, religion, national origin, age, handicap, color, or marital status in admissions, employment, and treatment of students and employees.

It is the policy and intent of the College, moreover, to comply with Section 504 of the Rehabilitation Act of 1973 as amended, which states:

"No otherwise qualified handicapped individual in the United States, as defined in section 7 (6), shall, solely by reason of his handicap be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

The College reserves the right at any time to make changes deemed advisable or necessary.

For information about the college, its programs, and its admissions procedure contact

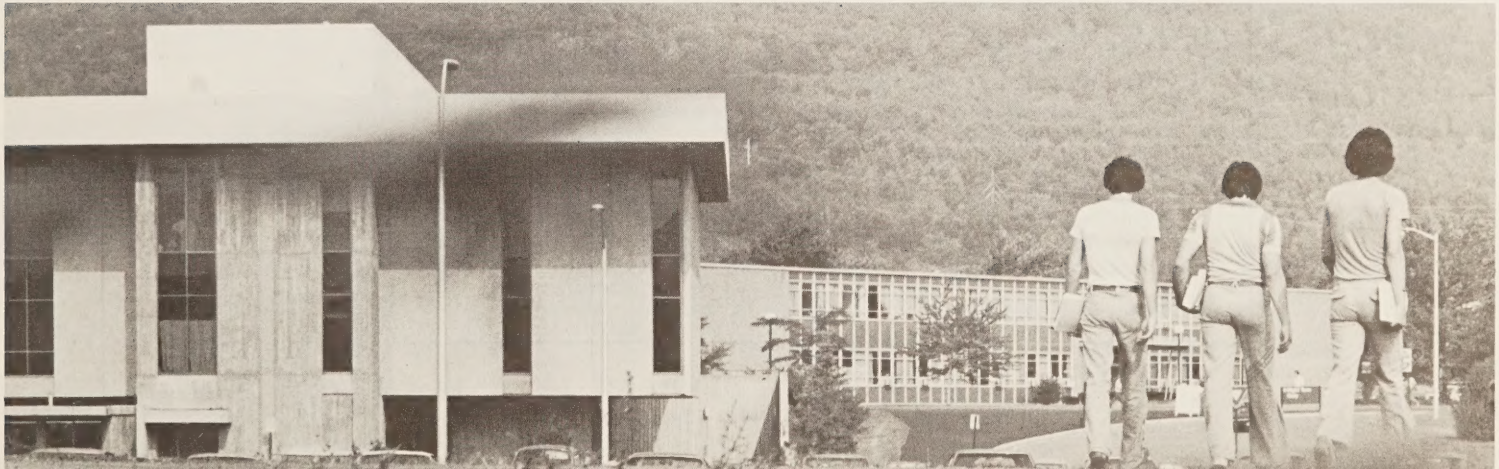
Office of Admissions
Broome Community College
P.O. Box 1017
Binghamton, New York 13902

1979 - 80 Catalog

Broome Community College

Binghamton, N.Y. 13902

A Comprehensive Community College
Supervised by the State University of New York
and
Sponsored by the County of Broome



47 COLLEGE PROGRAMS OF STUDY

DEGREE-GRANTING CURRICULUMS IN 25 FIELDS OF STUDY

OCCUPATIONAL PROGRAMS

The following curriculums are designed to prepare graduates for immediate employment:

Business
- 1-Accounting
- 2-Marketing Management and Sales
- Secretarial
  - 3-Executive
  - 4-Engineering (Industrial)
  - 5-Office Services Assistant

Engineering Technology
- 6-Chemical Technology
- 7-Civil Technology
- 8-Electrical Technology
- 9-Fire Protection Technology
- 10-Industrial Technology
- 11-Industrial Safety and Occupational Hygiene
- 12-Mechanical Technology

Health Sciences
- 13-Dental Hygiene
- 14-Medical Laboratory Technology
- 15-Medical Office Assistant
- 16-Medical Record Technology
- 17-Nursing
- 18-Radiologic Technology

Special Career Programs
- 19-Child Care
- 20-Criminal Justice — Police
- 21-Individual Studies
- 22-Paralegal Assistant

UNIVERSITY PARALLEL PROGRAMS

These curriculums are designed to prepare graduates for transfer to four-year colleges and universities in the third, or junior, year:

- 23-Business Administration
- 24-Engineering Science
- 25-Liberal Arts and Sciences

DIPLOMA PROGRAMS IN 18 FIELDS OF STUDY

These programs generally consist of half the number of credits in an associate degree curriculum and are, therefore, the equivalent of one year of college study. Most are given in the evening.

Business with emphasis in:
- 1-Accounting
- 2-Computer Studies
- 3-Management
- 4-Marketing — Sales — Retailing

5-Child Care

6-Criminal Justice

7-Fire Protection Technology

Industrial Technology
- 8-Applied Mathematics
- 9-Chemical
- 10-Civil
- 11-Computer Studies
- 12-Electrical
- 13-General Technical Studies
- 14-Industrial Safety and Occupational Hygiene
- 15-Mechanical
- 16-Production Management

17-Liberal Arts
18-Paralegal Assistant

CERTIFICATE PROGRAMS IN 4 FIELDS OF STUDY

These programs lead to certificates in areas for which entry-level employment does not require an associate degree, or they consist of a concentration of studies in a particular area which may be up to a year of college work:

- 1-Basic Electronics (Offered jointly with Tompkins Cortland Community College)
- 2-Dietetic Assistant
- 3-General Office
- 4-Interior Design

HOW TO USE THIS CATALOG

To help readers find their way through the pages of this catalog, a few words of explanation may be helpful. The catalog is assembled in essentially five parts, as follows:

PART 1, which consists of pages 1 to 27, contains the policies, procedures and regulations of the College. And as the accompanying table of contents shows, these are divided into such areas as admissions, financial aid, expenses, academic affairs and student affairs.

PART 2, which runs from pages 27 to 51, is a rundown of the College's programs and curriculums, arranged in alphabetical order. It shows the courses taken by students in each semester, along with the number of class hours, laboratory hours and credits for each. A summary of the field for which each curriculum prepares its graduates is also included.

PART 3, from page 52 to 63, is directed to part-time students. It has important academic information for them including a presentation of the programs of study for them for degrees, certificates and diplomas, as well as mini courses.

PART 4, covering pages 64 to 104, is a listing of the descriptions of the college's courses. These are arranged in alphabetical order, according to subject matter, starting with the Accounting and other business courses.

PART 5, which appears on pages 105 to 116, is essentially the listing of the administration and faculty of the college. There is also some information about the State University of New York, of which the College is a part, and the College Calendar.

Attention is also directed to the **INDEX** on pages 114 and 115. This is an alphabetical listing of the topics covered in the catalog together with the page numbers where one can find them.

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LONG RANGE GOALS

Broome Community College is committed to a broad view of education defined simply as the preparation of people to live in today's complex world.

It is an accepted fact that benefits from our College programs flow to many persons, directly and indirectly. Benefits take many forms. Some are individual and accrue to the direct recipients of community college education. Among the advantages are a higher income, a more satisfying job, greater effectiveness as a consumer, greater ability in allocating time as well as money, direct enjoyment of the educational process and its related activities, and lifetime enhancement of cultural and other experiences.

Some benefits are social and accrue to non-recipients as well as direct recipients of community college programs. Among the gains are greater economic growth based on the general advancement of knowledge and elevation of skills and on the higher proportion of the population in the labor force and the enhanced mobility of members of the labor force.

Other gains include greater political effectiveness of a democratic society based on the more adequate knowledge and more active participation of citizens; greater social effectiveness of society through the resultant better understanding and mutual tolerance among individuals and groups; the more effective preservation and extension of our cultural heritage; the greater ability of individuals and groups to accept and adjust to rapid change; and the greater potential contribution of educated parents to the welfare of their children.

Broome Community College strives to create a stimulating environment and to shape the College to meet the needs of those it serves. Our College in a democratic way will assist in promoting educational experiences for the students that will lead to the fulfillment of their personal goals; developing within the students a sense of responsibility to themselves and to others; and serving the community by offering flexible curriculums and a variety of resources and activities to meet its needs.

OBJECTIVES

1. In providing equal opportunities in response to community needs and interests:
   a. Students will identify their academic and vocational strengths and/or interests.
   b. Students enrolled in career-oriented curriculums will demonstrate competencies required for paraprofessional, vocational or technical employment.
   c. Students enrolled in transfer curriculums will plan and execute their programs in order to achieve acceptance and success at a baccalaureate degree-granting institution.
   d. Students who are disadvantaged in the areas of reading, writing, mathematics and/or study skills may take developmental courses.
   e. Students interested in continuing education will avail themselves of courses for self-improvement, leisure enrichments and lifelong use.
2. The students will participate in a democratic society by supplementing their basic academic commitments and testing their ideas and ideals through active involvement in curricular, extracurricular and community affairs.
3. The community will utilize the College as a cultural, social and educational resource.
4. Members of the faculty and professional staff will assist students in pursuing academic, vocational and personal goals.

These objectives will be achieved through a regular schedule of day and evening classes, a counseling program and other College resources. Students and faculty will engage in a continuous evaluation of students' abilities, accomplishments and interests.

Admissions

The Admissions Office selects students as they apply, complete the admissions process, and are found suitably qualified for a particular program.

Application forms may be obtained from the Broome Community College Admissions Office or from most high school guidance offices. Completing the application and forwarding the necessary information to the College is the applicant's responsibility, not the College's or the high school guidance counselor's.

Applicants are advised to look this catalor over carefully to become familiar with the program they choose to enroll in. The chart on page 7 is especially helpful, as it shows the high school subjects required and recommended as preparation for the College's degree offerings.

Acceptance by the BCC Admissions Office applies only for the particular semester designated. If an applicant decides to postpone enrollment to any future semester, he/she must re-apply. To simplify the reapplication process, the Admissions Office keeps applicants' records on file for two years.

Here are a few items to note concerning the application process and requirements:

1. BCC does not require the American College Testing (ACT) or Scholastic Aptitude Test (SAT) score reports. If either or both are available, however, they should be forwarded to the Admissions Office.
2. The application form and instructions have been made as short and concise as possible. This is one of the reasons the State University of New York Application and Guidebook is not used.
3. The application must be accompanied by a $10 nonrefundable fee when it is sent to the Admissions Office, unless the applicant is re-applying or seeking admittance into the Early Admissions program, which is described on page 6.

Some of the Faces of BCC

FULL OPPORTUNITY PROGRAM

By law, BCC is required to admit to some full-time program every applicant who is (a) a resident of Broome County, (b) will be graduated from high school the preceding June or (c) is a veteran of the armed forces with a high school diploma. This requirement does not necessarily mean that acceptance will be to the curriculum of the applicant's choice, nor that in all cases a diploma is required.

To qualify for this guarantee, Broome County residents must complete and submit all their application information no later than March 1. After that date, applicants will be considered regardless of their place of residence, high school graduation date or veterans status.

SPECIAL ADMISSIONS PROGRAMS

Early Admissions is a program for high achieving students who are in high school and can benefit from taking college-level courses, full or part-time, *before* graduating from high school. While high school seniors are usually enrolled in this program, qualified juniors and sophomores may also be eligible.

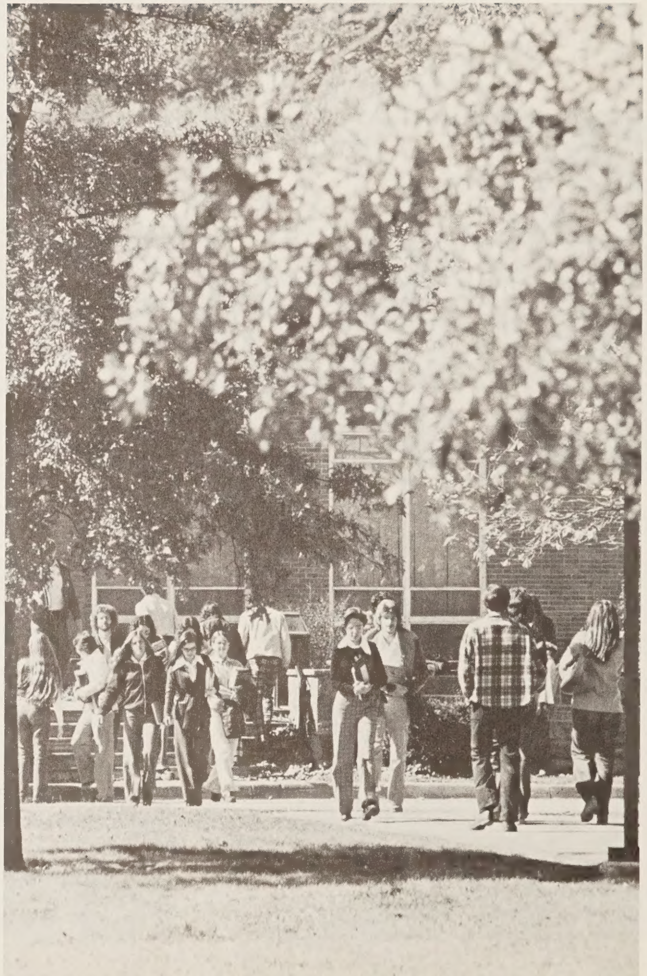
Anyone interested in part-time Early Admissions should contact the Admissions Office or his/her high school counselor for the special application form; full-time applicants should use the regular new student application.

The **Educational Opportunity Program (EOP)** is designed for students who are educationally and economically disadvantaged and can meet the established criteria for assistance. For more details, see page 24.

Non-High School Diploma applicants may qualify for a high school diploma by successfully completing 24 credit hours of course work at BCC or any college in a degree, diploma or certificate program. Students currently in high school or those having been out of high school less than one year typically **cannot** qualify for this program.

Transfer credit for students who have taken or are taking college level course work is subject to the approval of the chairperson of the student's academic department. Grades earned will not be entered into the cumulative grade-point average at Broome Community College. Students must in all cases submit to the College Admissions Office official transcripts of all college level work taken and/or being taken before formal acceptance will be granted.

Students transferring courses to BCC will be required to complete in credit hours the equivalent of a semester's course of study at BCC for graduation. The determination of this minimum will be the responsibility of the department faculty sponsoring the curriculum, but in no case will the requirement be less than 12 semester credits.



ACADEMIC PREPARATION FOR ADMISSIONS

Curriculum	REQUIRED High School subjects	RECOMMENDED High School subjects
Business Accounting Marketing Bus. Admin. Secretarial		2 units Mathematics incl. Intermediate Algebra 2 units Science College preparatory courses, Typewriting
*Chemical Technology	Chemistry 3 units Mathematics incl. Trigonometry	Additional Mathematics and Science courses Physics, Chemistry
*Civil Technology	Physics 3 units Mathematics incl. Trigonometry	Additional Mathematics Technical courses
†Dental Hygiene	‡1 unit Mathematics Biology, Chemistry	Geometry Social Studies Typewriting
*Electrical Technology	Physics 3 units Mathematics incl. Trigonometry	Additional Mathematics Technical courses Physics
*Engineering Science	Chemistry, Physics 3½ units Mathematics incl. Advanced Algebra or Pre-calculus Math	Additional Mathematics Science and Technical courses, Computer Programming
Liberal Arts and Sciences		2 units Mathematics 4 units in any combination of science, language or additional mathematics College preparatory courses
*Mechanical Technology	Physics 3 units Mathematics incl. Trigonometry	Additional Mathematics Technical courses
†Medical Laboratory Technology	2 units Mathematics Biology, Chemistry	Additional Mathematics Science courses
†Medical Office Assistant	1 unit Mathematics Biology, Chemistry	Additional Mathematics Science courses Typewriting
†Medical Record Technology	1 unit Mathematics Biology	Additional Mathematics Science courses, Chemistry Typewriting
†Nursing	Algebra Biology, Chemistry	College preparatory courses
†Radiologic Technology	2 units Mathematics 1 unit Biology	Additional Mathematics Science courses, Typewriting 1 unit Physics

*Academic units of Mathematics are Regents courses, such as Elementary Algebra, Geometry, 11th year Math or Trigonometry. (For Engineering Science Students, 12th year Math).

*BCC has a developmental program that enables students lacking the proper academic preparation for this curriculum to take courses that will qualify them. They can take these courses at BCC or elsewhere during the summer preceding their enrollment or during the fall and spring semesters, in which case they would need three years to complete the curriculum.

†Academic units of Mathematics are Regents courses such as Elementary Algebra, Intermediate Algebra or Geometry.

†In these programs, Broome Community College gives priority for admissions to Broome County residents who will graduate from high school this academic year or are service veterans.

†Students interested in a degree in a health science curriculum who enter the College in another program are cautioned that there is no guarantee that a petition to transfer will be approved. They should discuss the possibilities with the appropriate department chairperson.

‡Students without geometry must complete a short geometry module in the summer before they enter BCC or during the first semester of their freshman year.

NOTE: The REQUIRED SUBJECTS listed above must be Regents subjects, except for Chemistry in Engineering Science and the science courses in the Health Sciences programs. Regents or general level subjects are appropriate in those instances.

Grades of C (74) or above are necessary in all the preparatory required high school (college) subjects for Dental Hygiene and Nursing applicants and in the biology requirement for Radiologic (X-ray) Technology. A grade of at least 80 is needed in Physics for Engineering Science applicants. All other preparatory required high school (college) subjects must be completed with grades of D (65) or better.

Financial Aid

ESTIMATED EXPENSES FOR ACADEMIC YEAR

In planning to attend BCC, a student should expect the following typical expenses during an academic year. Expenses are given for a 9-month period.

1. Tuition — New York State Residents	$ 700
Out of State Students	1400
2. Fees	75
3. Books and Supplies (Costs vary with curriculum)	175

Estimated Living Expenses

	Commuting Student Living at Home and Dependent on Parents	Resident Student Living Away from Home and Dependent on Parents	Single Student Self-Supporting	Married Student Self-Supporting
4. Room and Board	$ 800	$1944	$2655	$3060
5. Personal Expenses	400	400	525	787
6. Transportation	275	275	648	765
7. Lunches at School	320			
TOTAL BUDGET (1 through 6)	$2745	$3569	$4778	$5562

Consideration is given for expenses incurred by parents for maintenance costs for students living at home. Out of State Students add $700 to total budget.

— ALL COSTS ARE SUBJECT TO CHANGE —

FOR CHANGE IN POLICY, SEE ADDENDUM SHEET INSIDE BACK COVER OF CATALOG

Considerable financial aid is available to students of Broome Community College, and the College maintains a Student Financial Aid Office to help students in this area. Information and applications for financial aid are sent to students who are seeking full-time enrollment when they apply for admission. Any part-time student planning to take 6 credit hours or more may qualify for financial aid by formally applying and being accepted into a degree, diploma or certificate program. Part-time students may receive information/application by contacting the Student Financial Aid Office.

Financial aid at BCC falls into three broad categories—grants, loans, part-time employment. Assistance usually comes from a combination of these resources commonly referred to as a "financial aid package."

STUDENT AND FAMILY RESOURCES

The College offers financial assistance to help students who still have need after family resources are taken into consideration. To determine a realistic family contribution, the College subscribes to the services offered by the College Scholarship Services (CSS).

The Financial Aid Form (FAF) is the official document for submitting a statement of financial resources to CSS. This form may be obtained through the local high school guidance office or the College Financial Aid Office. A CSS brochure entitled "Meeting College Costs" is sent to all applicants to assist in estimating how much aid is needed. This brochure is available to the general public at the Financial Aid Office and will be provided upon request.

HOW TO APPLY FOR FINANCIAL AID

All students must apply for financial aid each academic year.

Federal and State Gifts

All financial aid applicants will be expected to apply for two major sources of financial aid — the Federal government's Basic Educational Opportunity Grant (BEOG) and the State's Tuition Assistance Program Award (TAP). Although the College provides information, applications and assistance, these funds are not generated by the College and must be applied for directly by the student to the agency. Further information regarding these and other problems is available at the Financial Aid Office (Wales Building, Room 101).

College Administered Financial Aid

To be considered for financial aid administered by the College, parents of dependent students and self-supporting students must submit the Financial Aid Form (FAF) to the College Scholarship Service and the College Application for Financial Aid to the Financial Aid Office. By filing the forms outlined above, students will be considered for these financial aids, about which further information is available at the Financial Aid Office (Wales Building, Room 101).

Federal

- National Direct Student Loan
- College Work Study
- Supplemental Educational Opportunity Grant
- National Nursing Loan
- National Nursing Scholarship

Institutional

- BCC Foundation Grant

The college administers a number of programs which have been established by private individuals, companies, and organizations. These scholarship and grant programs have varying eligibility requirements. Students who wish to apply for these special scholarships may request an application from the Financial Aid Office.

Priority Funding Dates

Fall Semester	April 15
Spring Semester	December 1

Incoming students should apply for financial aid when they apply for admissions. Because all college-based funds are limited, students are strongly encouraged to submit the appropriate forms far in advance of the above priority dates.

Completed applications received prior to April 15 will be given first priority. Applications received after this date will be considered as long as funds are available.

FAF should be mailed to College Scholarship Service before March 1 to be received at the College by April 15.

Notification of Decisions

Students are generally notified of the action taken on their application shortly after April 15. Students who apply late will be notified as folders are completed. A brochure explaining students' rights and responsibilities is sent to all financial aid recipients at the time the award is made. Interested students may receive a copy of this brochure before an award is made by contacting the Financial Aid Office.

If a student's request for aid is denied, the reasons for the decision are explained. Students may request an appeal on financial aid decisions by writing a letter to the Vice-President for Student Affairs.

Reasonable Academic Progress

If a financial aid recipient is not making reasonable academic progress, he/she will no longer be eligible for financial assistance until satisfactory academic progress is being made. The definition of "reasonable academic progress" was being reviewed by the College when this catalog was printed. When the decision is reached, each registered student will be notified.

FOR CHANGE IN POLICY, SEE [illegible] SHEET INSIDE BACK [illegible] OF CATALOG

ADDITIONAL FINANCIAL AID INFORMATION IS AVAILABLE IN THE COLLEGE FINANCIAL AID OFFICE (Wales Building, Room 101), such as brochures from the Office of Vocational Rehabilitation (OVR) and Social Security.

Expenses

Tuition and fees are payable at the Finance Office prior to each semester's registration according to a payment schedule released by the College.

TUITION

STUDENTS CARRYING 12 OR MORE CREDIT HOURS —considered full-time students.

For New York State residents	
With residency certificate	$350 per semester
Without residency certificate	$700 per semester
For out-of-state residents	$700 per semester

After acceptance by the College, the student will be billed for an advance payment of $50. This will be applied toward the tuition payment for the first semester but it will not be refunded should the student withdraw either before or after registration.

The responsibility for payment of tuition rests upon the student, who will be billed prior to the start of each semester. Students will not be allowed to register or will be dismissed if the established due dates for payment are not met.

STUDENTS CARRYING LESS THAN 12 CREDIT HOURS —considered part-time students.

For New York State residents	
With residency certificate	$27 per credit hour
Without residency certificate	$54 per credit hour
For out-of-state residents	$54 per credit hour

SEE TUITION REFUND POLICY ON PAGE 11

FOR CHANGE IN POLICY, SEE ADDENDUM SHEET INSIDE BACK COVER OF CATALOG

RESIDENCY CERTIFICATE

To qualify for the resident tuition fee, a student is required by law to present once each academic year on or before registration a residency certificate indicating that he or she has been a legal resident of the State of New York for one year and of a county for six months.

Broome County Residents—Full-time students admitted to the College will be mailed a copy of the application for residency certificate prior to registration. This application must be completed and presented at the time of tuition payment.

Out-of-County Residents—Full-time students admitted to the College will be mailed a copy of the application for residency certificate prior to registration. The application must be completed, notarized and presented to the **County Treasurer of the County in which the student resides.** The County Treasurer will then issue a residency certificate to the student. This residency certificate must be presented at the time of tuition payment.

Part-time students must meet the same requirements as stated above. The application for residency certificate form is available at the Finance Office and the Office of Continuing Education.

The completed residency forms are required once each academic year.

Failure to comply with this requirement will result in paying double tuition, not to exceed the limitations cited above.

SEE PAGES 8 AND 9 FOR FINANCIAL AID

FEES

STUDENT ACTIVITY

Full-Time Student	$25 per semester
Part-Time Student	2 per semester

The activity fee entitles full-time day students to admission to varsity games, dances and parties, as well as a subscription to the student newspaper and the opportunity to participate in a varied program of co-curricular activities, including intramural athletics. Students will be billed $25 at the start of each semester.

Part-time day students (those taking fewer than 12 credit hours) pay a $2 student activity fee per semester. This entitles them to admission to convocations and to issues of The Fulcrum, the student newspaper. It does not include, however, admission to varsity sports events or membership in student organizations or to copies of The Citadel, the student yearbook. The student has the option though of paying $25 per semester and receiving the same activity privileges as full-time day students.

The Student Activity Fee is apportioned as follows:

Campus publications Newspaper, Yearbook	15%
Program Board Speakers, Performers, Dances, Movies, Picnics, Special On and Off-Campus Programming	26%
Club Council 27 funded clubs including most curriculum organizations	14%
Athletics 11 male and female intercollegiate teams, coaches stipends, intramurals, administrative expenses	33%
United Student Government Administrative expenses, vehicle maintenance, class gift, audit, supplies	12%
	100%

SEE FEE REFUND POLICY IN RIGHT-HAND COLUMN

ACCIDENT INSURANCE AND HEALTH FEE

Full-Time Student	$15 per year
Part-Time Day Student	$1 per semester

Mandatory fee for all full-time day students for accident ($9 per year) and health ($3 per semester). Money collected from this fee is used to provide physicians services, drugs and medical supplies maintained in the Health Service for student use. The fee is non-refundable if a student withdraws from the college.

The accident policy covers the student for 12 months commencing September 4, 1979 for expenses incurred as a result of any accident, on or off campus. Maximum coverage is $1000 per accident. Claim forms are available in the Health Service during the academic year and from the Vice-President for Student Affairs in the summer.

Students who withdraw and wish a refund of their accident policy must apply directly to the Insurance Company. This information is available either in the Finance Office or in the Health Service.

Compulsory Health Service Fee for Part-Time Day Students .... $1 per semester

GRADUATION $13

Paid during the semester preceding graduation and is refundable if the student does not graduate.

CHEMISTRY LABORATORY .... $5 per semester

For all students taking chemistry laboratory courses with 200 numbers.

APPLICATION	$10
CREDIT BY EXAMINATION	20
LATE REGISTRATION-PAYMENT FEE	10
RETURNED CHECK FEE	5
TRANSCRIPT FEE	1

For Part-time Evening Students

DIPLOMA FEE	$ 8
CERTIFICATE FEE	8
STUDENT ACTIVITY FEE	2

MEDICAL INSURANCE

The College does not provide medical insurance, but it is available through a number of insurance companies including Blue Cross/Blue Shield.

ALUMNI LIFETIME MEMBERSHIP $20

Membership in the Broome Community College Alumni Association is optional. The lifetime dues are payable during the semester preceding graduation, and they entitle graduates to complete Association benefits.

Books, Supplies, Uniforms

Students provide at their own expense the necessary books and instructional materials. These may be purchased at the College Book Store maintained by the Faculty-Student Association for the convenience of the students. The cost varies, depending on the curriculum, from about $170 to $300 per year.

In the Health Science curriculums students will provide, at their own expense, their own transportation to off-campus locations for necessary clinical and other experience.

In addition, some curriculums require uniforms. Among these are Nursing, Radiologic Technology, Medical Laboratory Technology and Medical Office Assistant. Gym clothes are necessary for physical education classes. Dental instruments and uniforms for Dental Hygiene students cost approximately $350 to $400.

Refund Policies, Procedures

TUITION REFUND POLICY

Students who withdraw from classes during the first three weeks of a semester will be entitled to tuition refunds on the following basis—100% refund during the first week, 50% during the second week and 25% during the third week. After three weeks of classes there will be no refunds. See College Calendar on page 116 for additional information on dates for tuition refunds.

FEE REFUND POLICY

The student activity fee is refundable according to the same schedule as tuition. See "Tuition Refund Policy" above.

REFUND PROCEDURE

An application for refund of tuition and fees must be made in person and in writing in the Registrar's Office (W-206). The application must be on the College form provided. The date on which the application is filed is considered the official date of the student's withdrawal and any refund to which the student may be entitled is computed using that date.

Academic Affairs

REQUIREMENTS FOR GRADUATION

COMMON REQUIREMENTS FOR ALL THREE DEGREES GRANTED BY THE COLLEGE:

1. Successful completion of all courses for the degree as contained in this Catalog.
2. A 2.00 cumulative GRADE POINT AVERAGE in those courses applicable to the degree.
3. Recommendation of the faculty for the awarding of the degree.
4. Satisfaction of all obligations to the College.

THE ASSOCIATE IN APPLIED SCIENCE DEGREE (AAS)

This degree is awarded to graduates of curriculums in these fields of study:

Accounting
Chemical Technology
Child Care
Civil Technology
Criminal Justice — Police
Dental Hygiene
Electrical Technology
Engineering (Industrial) Secretarial
Executive Secretarial
Fire Protection Technology
Individual Studies
Industrial Safety and Occupational Hygiene
Industrial Technology
Marketing Management and Sales
Mechanical Technology
*Medical Laboratory Technology
Medical Office Assistant
*Medical Record Technology
Nursing
Office Services Assistant
Paralegal Assistant
*Radiologic Technology

5. Curriculum Requirements
    a. The minimum number of credits in a student's major field as determined by each academic department. These are courses intrinsic to and required by the various curriculums.
    b. A minimum of 20 credits in Liberal Arts and Sciences courses will include:
        1) Social Sciences: a minimum of 6 credits
        2) Natural and Physical Sciences (including mathematics): a minimum of 6 credits
        3) Humanities: a minimum of 6 credits in English (may include a maximum of 3 hours in speech)
    c. Satisfactory completion of all courses in a curriculum or as approved in a department.
    *d. Summer clinical experience required for graduation in curriculums noted.

THE ASSOCIATE IN SCIENCE DEGREE (AS)

This degree is awarded to graduates of the Business Administration, Engineering Science and Individual Studies curriculums and the Science Option in Liberal Arts and Sciences.

5. Curriculum requirements:
   a. At least 30 credits in the humanities, natural sciences, mathematics, the social sciences.
   b. Physical Education—2 credits (for Liberal Arts and Engineering Science students only).

THE ASSOCIATE IN ARTS DEGREE (AA)

This degree is awarded to graduates in the Liberal Arts and Sciences curriculum.

5. Liberal Arts and Sciences requirements distributed as follows:
   a. English: a minimum of 12 credits, of which 6 shall be in composition and 6 in literature.
   b. History: a minimum of 6 credits in approved courses.
   c. Humanities: a minimum of 6 credits (6 in philosophy or 6 in a foreign language).
   d. Mathematics: Students who have completed fewer than 3 units of secondary school mathematics (through 11th year math) are required to take 2 semesters of college level mathematics.... Students who have completed 3 units of secondary school mathematics (through 11th year math) are required to take one semester of college level mathematics.... Students who have completed more than 3 units of secondary school mathematics (including 11th year math) are not required to take additional mathematics. They may, however, elect an appropriate math course or an elective in another field.
   e. Natural and Physical Sciences: a minimum of 8 credits.
   f. Social Sciences: a minimum of 6 credits.
   g. Electives: 16 credits minimum. A maximum of 12 credits may be taken outside the offerings in Liberal Arts and Sciences with the approval of the dean of the division.
   h. Physical Education: 2 credits. Exceptions to this requirement may be made by the dean of Liberal Arts for valid reasons.
   i. Satisfactory completion of all courses in a curriculum or as approved in a department.

CREDIT BY EVALUATION

Non-Traditional Study

Broome Community College acknowledges that it is necessary and worthwhile to provide methods for considering various non-traditional activities for credit. By documenting and demonstrating that learning has taken place through various prior experiences, students may be awarded academic credit. Various examinations may also be taken for credit.

The Department of Special Career Programs is the initial contact point for students interested in obtaining more information about non-traditional study, examination programs, and their suitability for various student purposes. Students will be assisted in determining whether or not such study or examinations would be worth pursuing for their educational objectives. The appropriate academic department is responsible for integrating any credit achieved in this manner into the student's academic program.

Advanced Placement Examination (AP)

The College will recognize for credit the AP examinations of the College Entrance Examination Board. A score of 3 or above is acceptable for credit upon departmental approval. Laboratory courses may require additional lab work for full credit for a college course. Credit awarded will be handled as transfer credit.

College Proficiency Exams (CP)

The CP exams of the University of the State of New York will be recognized for credit upon approval by the appropriate department. Credit awarded will be handled as transfer credit.

College Level Examination Program (CLEP)

The College will recognize successful achievement at or above the 50th percentile on CLEP exams in accordance with SUNY and American Council of Education guidelines. Approval of credit for degree requirements or electives is determined by the appropriate department. Credit approval will be handled as transfer credit.

BCC Credit By Examination (CBE)

The College in many instances will provide credit by examination for knowledge gained outside the traditional classroom situation. Guidelines for this procedure are available from the College's department chairpersons. There will be a fee of $20 for the exam. If a BCC student receives an NC grade after normal completion of a course, no credit by examination may be given in that subject for that given grading period.

Special Individual Assessment

The College will evaluate for credit various types of learning acquired outside the usual classroom environment. Particular criteria for awarding credit may be applied by an academic department. Approval of credit is the responsibility of the appropriate department. Students must identify what has been learned.

Special Assessment of Group Sponsored Learning

The College will evaluate for credit various types of learning acquired through participation in learning experiences or training provided by businesses, industry, unions, professional societies, governmental agencies or the military. Particular criteria for awarding credit may be applied by an academic department, and approval of credit is the responsibility of the department.

PROGRAMS OF THE COLLEGE

DEGREE PROGRAMS

Graduates of Broome Community College receive associate degrees, and the courses of study fall into four general categories—technical, business, liberal arts and health sciences. Liberal arts courses are included in all curriculums, as it is believed that students need more than technical competence to understand people and their daily working and personal inter-relationships.

Applicants to the College should consider carefully the type of program they wish to pursue, for the nature of the offerings makes it difficult for a student to switch from one curriculum to another after commencing studies.

Engineering and Engineering Technology

In the area of technical education, the College offers five programs. One, Engineering Science, is in effect the first two years of an engineering curriculum, and students who do satisfactory work in it should experience little difficulty in transferring to engineering colleges at the third-year level.

The other four are designed to train engineering technicians in the fields of Chemical Technology, Civil Technology, Electrical Technology and Mechanical Technology. Students in these programs are prepared for employment in various types of technical work immediately after graduation.

In addition, the College offers two programs for part-time students in the evening. These are Industrial Technology, which has six major areas of study to choose from, and Fire Protection Technology.

Business

The Business curriculums are designed primarily to prepare graduates for immediate employment in one of five fields—Accounting, Marketing Management and Sales, Engineering Secretarial, Executive Secretarial and Office Services Assistant. In addition, there is a sixth option, Business Administration, that combines more university parallel preparation with a minimum of job-oriented courses. This program is intended for the person who plans to continue his/her college education for a baccalaureate degree, even though he/she may want to work for a while before transferring to a four-year college.

It is possible to transfer from all programs. But because each student's transfer credits are evaluated by the four-year institution, the number of credits accepted can vary.

Liberal Arts and Sciences

University parallel curriculums in Arts and Sciences prepare students for transfer to four-year colleges or universities. While the aim of liberal learning is to broaden human perspective and deepen understanding through study of philosophy, history, literature and the arts, students who identify career/professional goals early can begin to develop appropriate academic concentrations. Liberal Arts and Sciences also offers degree programs for those seeking immediate employment. Please refer to the Career Models on page 41 in this catalog.

Health Sciences

Opportunities for men and women interested in the health sciences field are provided in six areas—Dental Hygiene, Medical Office Assistant, Medical Record Technology, Nursing, Medical Laboratory Technology and Radiologic Technology. Graduates are prepared to work immediately after graduation in physicians' or dentists' offices, laboratories or hospitals.

Graduates of these programs are also qualified to take whatever licensing examinations their professions require.

Others

The College offers degree opportunities in five other academic areas—Child Care, Criminal Justice, Individual Studies, Industrial Safety and Occupational Hygiene, and Paralegal Assistant. All lead to the Associate in Applied Science degree, and Individual Studies students may earn either that degree or the Associate in Science, depending on their program of study.

SPECIAL CAREER PROGRAMS

The following curriculums at the College are conducted under the Department of Special Career Programs:

- Child Care (AAS degree)
- Criminal Justice (AAS degree)
- Dietetic Assistant (Certificate Program)
- Fire Protection Technology (AAS degree)
- Individual Studies (AAS or AS degree)
- Industrial Safety and Occupational Hygiene (AAS degree, Diploma Program)
- Paralegal Assistant (AAS degree, Diploma Program)

DIPLOMA AND CERTIFICATE PROGRAMS

Broome Community College also has diploma and certificate programs which are less than two years in length, have more specific objectives than the associate degree offerings, and consist of about one year of college credit. Some are designed to prepare students for jobs that require specialized higher education, but not necessarily a college degree; some provide students with an opportunity to upgrade their academic backgrounds or expand their qualifications for a particular field of study; and some offer college credits and additional training to people already working in the field.

Most of the diploma and certificate offerings carry college credits, and they can lead a person into some of Broome Community College's degree-granting curriculums. They can be taken on a full-time or part-time basis, and most of them are offered in the evening although some are available through day classes. No specific high school courses are required for enrollment.

For further details, a listing of courses and literature about most of these diploma and certificate programs, contact the BCC Office of Continuing Education (Wales Building, Room 108 or phone 772-5012).

Diploma Programs

- Business Emphases
  - Accounting
  - Computer Studies
  - Management
  - Marketing/Sales/Retailing
- Child Care
- Criminal Justice
- Fire Protection Technology
- Industrial Technology
- Emphases
  - Applied Mathematics
  - Chemical
  - Civil
  - Computer Studies
  - Electrical
  - General Technical Studies
  - Industrial Safety and Occupational Hygiene
  - Mechanical
  - Production Management
- Liberal Arts
- Paralegal Assistant

Certificate Programs

- Basic Electronics (Conducted in conjunction with Tompkins Cortland Community College in Dryden, N.Y.)
- Dietetic Assistant
- General Office
- Interior Design

COOPERATIVE PROGRAMS WITH OTHER COLLEGES

Broome Community College has direct transfer agreements with a number of four-year colleges to facilitate the acceptance of BCC graduates into the third year of study. The number of colleges with which BCC has such agreements is increasing each year. Further details are available in the Counseling and Student Development Center (Wales Building, Room 200).

With SUNY Binghamton

Full-time Broome Community College students have the opportunity to take courses without additional tuition at The State University Center at Binghamton, located approximately 10 miles west of the BCC campus. Two programs are available, cross-registration and joint degree.

BCC students may cross-register at Binghamton for one course each semester. The courses for which they cross-register must be courses that are not available at Broome Community College.

The joint-degree program enables students in SUNY Binghamton's Bachelor of Arts degree program to simultaneously earn an Associate in Applied Science degree at BCC.

Additional information on these two programs is available in the office of the Dean of Academic Services (Wales Building, Room 202).

With Keystone Junior College

BCC students may also cross-register at Keystone Junior College in LaPlume, PA. for one course each semester. The courses for which they cross-register must be ones that are not available at Broome Community College, and they can take them without paying additional tuition. Additional information is available in the office of The Dean of Academic Services (Wales Building, Room 202).

GUARANTEED TRANSFER PROGRAM WITH STATE UNIVERSITY OF NEW YORK

Students who graduate from Broome Community College with Associate in Arts or Associate in Science degrees are guaranteed admission, at the third-year level, to a four-year college of the State University of New York. This guarantee has some limitations and details are available in the Counseling and Student Development Center (Wales Building, Room 200).

ONE-PLUS-ONE PROGRAMS

Broome Community College has One-Plus-One Programs with other two-year colleges to enable a student to attend BCC for one year and then transfer to the other college for the second year for the Associate in Applied Science degree. This program permits students to begin studying at BCC for a degree in a field not offered at this College. By taking the BCC courses that one needs for the particular degree involved, residents of Broome County can enjoy the advantages of living at home during one year of their college attendance.

The following colleges offer transfer opportunities for students who have completed the appropriate one year study at BCC:

- Delhi Agricultural and Technical College
  - Hotel Restaurant Technology
  - Construction Technology
  - Architectural Technology
  - General Agriculture
  - Animal Husbandry-Dairy
- Canton Agricultural and Technical College
  - Agronomy/Horticulture
  - Agricultural Engineering
  - General Agriculture
  - Animal Husbandry
  - Dairy and Food Service
  - Mortuary Science
  - Science Laboratory Technology-Biology Option
- Paul Smith's College
  - Hotel and Restaurant Program

MINI COURSES

Broome Community College offers a wide variety of non-credit, short courses, mostly in the evening. See page 63.

STUDY ABROAD PROGRAMS

Broome Community College is a member of the College Consortium for International Studies, a group of 30 colleges spreading geographically from Canada to Florida and from California to Maryland. This consortium, during the 1979-80 academic year, will offer students a total of 65 overseas academic programs in 27 foreign locations.

The programs range from structured, formal courses at affiliated schools and institutions abroad, to service-learning and contract-independent study courses. Students may choose from intersession, short-term, semester and year-long programs.

Formal Programs

The consortium provides formal, structured programs lasting for a semester, a year or two years, in a variety of institutions in Denmark, England and Israel. Students study a full semester program (usually 15 to 18 credits) that is arranged prior to their departure at affiliated schools, institutions, colleges or universities abroad. The subject areas range from liberal arts courses to specialized programs, such as criminal justice, languages and human services. Programs are also available in Spain and Germany.

Many BCC students will find their academic and personal lives enriched through a cultural experience difficult to match in a conventional two-year course of study in this country. BCC maintains close communication with consortium offices in New York, London and Jerusalem to facilitate the placement of students in qualified institutions abroad.

Contract/Independent Study

Students studying independently enter into contractual arrangements with their mentors representing the institution. The students, guided by their mentors, identify the specific learning objectives for their contract and specify the learning activities through which these objectives are to be obtained. Learning activities may include individual and group seminars and tutorials, assigned readings and/or formal classes.

In addition, the learning contract clearly spells out the evaluation procedures to be followed: usually a combination of papers, examinations, projects, tapes. The evaluation methods, as all contract components, are agreed upon in advance (and prior to the student's departure for his study program abroad) and can be altered or modified only by mutual agreement by the mentor and student.

BCC's contract programs provide students with an avenue to benefit from unstructured learning and individual guidance while studying abroad. It should be noted that contract learning, particularly when engaged in overseas, is a very rigorous academic undertaking that requires imagination, self-discipline, planning and foresight in addition to the usual qualities of a good student. It should be considered only by serious students.

Intersession, Short-Term Programs

During each academic year the consortium conducts a wide variety of intersession and short-term programs in January, during the spring recess and in the summer months. Students at BCC who have been introduced to study abroad through these short-term programs, usually two to three weeks in length, often then decide to study overseas for a semester or year.

The short-term courses have grown in scope, as well as in number. They have enabled criminal justice students to study and compare the operations of the metropolitan police forces of Amsterdam, Paris and London. Other short-term program participants have had a chance to evaluate child welfare practices in the Scandinavian countries, or compare the nursing and health care practices in Israel to those in the U.S.

Admission to Programs

Admission to the College does not automatically insure admission to BCC's programs overseas; separate application must be made to the consortium. Students will be evaluated on their academic ability, motivation, maturity and potential adaptability to a foreign culture. In addition to BCC approval, interviews with personnel from affiliate consortium institutions may be required.

Credits, Transcripts and Tuition

Students register at BCC and pay the appropriate tuition, which in many cases covers the instructional costs abroad. Students are monitored through consortium offices in London and Jerusalem, or through individual mentors. Upon the successful completion of the formal program or after fulfillment of the contract, students will receive a BCC transcript reflecting the grades achieved or the course equivalents or the work done through the contract, greatly facilitating transfer of credits to other American institutions.

Students may earn up to 18 credits per semester, leading to an associate degree. Credits for intersession/short-term programs range from one to six, depending on the time spent abroad and the instruction offered in the program.

For additional details about any of the above programs, students should contact the Study Abroad Program Office at Broome Community College (Titchener Hall, Room 108—Phone (607) 772-5094).

FOR CHANGE IN POLICY, SEE
ADDENDUM SHEET INSIDE
BACK COVER OF CATALOG

PLEASE NOTE

As this catalog was being printed, the College was considering changes in the grading system to be effective at the start of the Fall 1979 Semester. The predominant feature of the proposal under study is the replacement of the NC grade with an F grade for students whose achievements in a course are unsatisfactory. Should this occur, all registered students will be notified and copies of the new policy will be available in the College's Admissions and Records Offices in the Wales Building. All topics covered on this page could be affected by the new policy.

GRADING INFORMATION

Grading Philosophy

Education is intended to be a refined and efficient process of learning. Although each individual learns to some degree from his life experience, the planning, organization and guidance provided within a course of study emphasize: (1) the important phases of learning; (2) the integration of knowledge into a meaningful whole; and (3) the acquisition of knowledge and skills.

Broome Community College's grading practices focus on **success** and **achievement.**

Grades

Grade	Honor Points Per Credit Hour	Explanation
A	4	Outstanding Achievement
B	3	Significant Achievement
C	2	Satisfactory Achievement
D	1	Minimal Satisfactory Achievement
AU	—	Audit
NC	—	No Credit
I	—	Incomplete Work

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Incomplete Grades "I"

When a student receives an I grade, he/she shall within two weeks after the beginning of the next regular semester contact his/her instructor and make arrangements which shall include a time limit (not to exceed one year) in which the work will be completed. The instructor will notify the director of records of the arrangements and when the student has completed the work notify the director of records of the grade to be assigned. If the student does not meet the time limit, the instructor shall notify the director of records to record an NC grade.

If the student does not contact the instructor in the two-week period at the beginning of the semester, the director of records shall automatically record an NC grade.

Mid-Term Grades

"NC" grades and D's may be reported to the student and his adviser at mid-term.

Audit

Students are encouraged to use the option of taking courses on an audit basis. Any student who completes a course by auditing will receive the grade AU on his/her record in place of credit grades. He/she may not receive credit for it later unless he/she re-registers in the course or challenges it according to the existing rules for credit-by-examination.

Students who register in a course for audit are expected to have the necessary prerequisites. In this respect students are encouraged to make full use of the College's counseling service, but the ultimate decision whether or not to enroll for audit shall be the student's responsibility. Consideration may be given to a student's request for transfer from credit to audit status or vice-versa. The end of the third week of classes is the deadline for such transfer.

Full-time students may audit courses with no additional charge, but they need approval of their department chairperson. For part-time students, the regular tuition schedule applies ($27 per credit hour for New York State residents and $54 per credit hour for out-of-state students). New York State residents who are 60 years of age or older may audit courses without charge on a space available basis.

FOR CHANGE IN POLICY, SEE
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OTHER ACADEMIC PROCEDURES

Dismissal from a Degree Program

A student must demonstrate discernible progress toward achieving a degree in a given program. After official enrollment in eleven semester hours of course work, a student must maintain a grade of "C" or better in 25% of his/her cumulative semester hours. Otherwise, he/she will be dismissed from the program of study. A student is officially enrolled if he/she is registered for credit in a course after the third week of classes.

In considering a student's petition for immediate re-admission after having been dismissed from a degree program, a two-fold process will be utilized. Students' petitions will initially be acted upon by the department chairperson. If additional action is requested, the petition may then be acted upon by the Vice-President of Academic Affairs.

Withdrawal from Courses

If a student withdraws from a course before or during the third week of classes, no record of withdrawal will appear on the transcript. However, if a student withdraws after the third week of classes, the date and an "NC" (no credit) will appear on the transcript.

Withdrawal from the College

Broome Community College has committed itself to a philosophy of providing whatever assistance is necessary to aid the student in completing his/her academic goals. Students are strongly encouraged to seek academic and personal counseling prior to any withdrawal.

Students who decide to withdraw from the College must complete the proper termination forms available in the Registrar's Office or Counseling Center. Failure to comply may cause the individual to lose any possible refund of fees.

Repeating Courses

A student who wishes to repeat courses already taken at Broome Community College must secure permission of the department chairperson.

When a student repeats a course to improve a grade previously received, the higher grade will be used to compute the cumulative grade point average.

Attendance Regulations

Attendance in all scheduled course activities is expected as part of each student's responsibility for his/her own education. The policy of the College is that the student's academic achievement will determine grades and not just the statistics of presence or absence.

Student Responsibility: Each student is responsible for any work missed regardless of reason for any absence in class.

Instructor Responsibility: Each instructor is responsible for relating the significance of attendance to the course's objectives and to inform the students of this significance in the first class meeting.

Department Responsibility: Within the spirit and framework of college policy, each department may develop its own guidelines to meet its needs. Such guidelines are subject to the approval of the vice-president for academic affairs.

Student Academic Appeal Procedure

Broome Community College has established a procedure to provide students an opportunity to appeal grades in any particular course(s) or academic dismissal. Copies of this Student Academic Appeal Procedure are available in the Office of the Dean of Academic Services (W-202), and the policy also appears in the Student Handbook.

Late Registration

An applicant may not register later than one week after the beginning of each semester except by permission of the Vice-President for Academic Affairs. A late fee will be charged.

Length of Curriculum

Most associate degree programs are designed to be completed in two years. The college year is divided into two semesters of 15 weeks each plus an evaluation week. Some students may choose or be required to take more than four semesters to earn their degrees. Radiologic Technology students and Medical Laboratory Technology students have special clinical laboratory experience in the summer of both their freshman and senior years.

Independent Study

Many academic departments of the College offer "Independent Study" courses which are arranged between an individual faculty member and a motivated student. The student has the responsibility to make appropriate arrangements with a faculty mentor and to secure the permission of the department chairperson before registering for independent study.

Independent Study courses are **not** intended to replace regular courses which the student was unable to schedule or which he did not complete. Rather, these courses provide an opportunity for the serious student who desires to expand his academic background beyond the scope and the depth usually found in a regular course. (See course description section for offerings.)

Absence Due to Religious Beliefs

Section 224-a of the State Education Law reads:

1. No person shall be expelled from or be refused admission as a student to an institution of higher education for the reason that he is unable, because of his religious beliefs, to attend classes or to participate in any examination, study or work requirements on a particular day or days.

2. Any student in an institution of higher education who is unable, because of his religious beliefs, to attend classes on a particular day or days shall, because of such absence on the particular day or days, be excused from any examination or any study or work requirements.

3. It shall be the responsibility of the faculty and of the administrative officials of each institution of higher education to make available to each student who is absent from school, because of his religious beliefs, an equivalent opportunity to make up any examination, study or work requirements which he may have missed because of such absence on any particular day or days. No fees of any kind shall be charged by the institution for making available to the said student such equivalent opportunity.

4. If classes, examinations, study or work requirements are held on Friday after 4 p.m. or on Saturday, similar or makeup classes, examinations, study or work requirements shall be made available on other days, where it is possible and practicable to do so. No special fees shall be charged to the student for these classes, examinations, study or work requirements held on other days.

5. In effectuating the provisions of this section, it shall be the duty of the faculty and of the administrative officials of each institution of higher education to exercise the fullest measure of good faith. No adverse or prejudicial effects shall result to any student because of his availing himself of the provisions of this section.

6. Any student, who is aggrieved by the alleged failure of any faculty or administrative officials to comply in good faith with the provisions of this section, shall be entitled to maintain an action or proceeding in the supreme court of the county in which such institution of higher education is located for the enforcement of his rights under this section.

6-a. A copy of this section shall be published by each institution of higher education in the catalog of such institution containing the listing of available courses.

7. As used in this section, the term "institution of higher education" shall mean schools under the control of the Board of Trustees of the State University of New York or of the Board of Higher Education of the City of New York or any community college.

THE CECIL C. TYRRELL LEARNING RESOURCES CENTER

The Cecil C. Tyrrell Learning Resources Center provides a wide variety of learning resources. Housed in the center are the Library, the Audio Visual Department, the Mathematics Learning Center, the Writing Center, the Reading and Study Skills Center and an Engineering Sciences and Technologies Learning Center, as well as offices and classrooms.

A staff of professional, technical and clerical specialists offers the students a broad range of services designed to meet their academic needs. Typical library services include lending of materials, information services, access to other learning resource centers, interlibrary loan service, assistance in research techniques, and instruction in the use of materials and equipment. A coin operated photocopier is also available.

The Learning Resources Center's primary function is to support and supplement the academic programs of the college and to provide a center for serious study, research and learning. Students are encouraged to use its facilities, materials, and services fully, but properly. Requests for information services and assistance are welcomed by the staff.

The facilities have a capacity of nearly 900 users. Individual carrels, lounge furniture, multiple person tables and stools, and a limited number of small group study rooms are available. Audio-visual equipment including projectors, tape and record players, micro-film reader/printers, as well as more specialized machines, are located in the center for student use. Some electric and manual typewriters are also available.

The Learning Resources Center was constructed in 1967–68 and named for the College's founding president in 1972, the year he retired after 26 years in the position. The building is an attractive and modern three-story structure, with more than 40,000 square feet of space devoted to its learning facilities.

The Learning Resources Center collections offer many different types of print and nonprint materials carefully selected to meet the academic needs of students at college level. The print collections consist of over 50,000 books, 450 current periodicals and backfiles, plus over 6,000 pamphlets.

More than 1,000 audio recordings, slides, filmstrips, maps, microfilms, multimedia kits, and other types of media add several thousand more items to the collection. An extensive file of college catalogs is maintained.

Most materials including magazines may be borrowed for use outside the center, although some restrictions are placed on reference and reserve materials. The basic loan period for books is two weeks, and for magazines and audio visual materials, one week.

Some loan periods may be extended if requested before the date the materials are due back in the center and the items not in demand. Overdue fines are not charged as a rule, but the college reserves the right to do so with proper notification.

Library cards will be issued to students upon request, but are not required for borrowing materials. Proper identification is necessary, however. Failure to return borrowed materials promptly upon notice can result in withholding of grades, transcripts and other services.

Lost and damaged materials must be replaced or paid for at current replacement costs, and the borrower is responsible for all materials charged out on his/her card.

The center is open for full service during the following hours:

Fall and Spring Semesters

Monday—Thursday	8 am to 10 pm
Friday	8 am to 4:30 pm
Sunday	4 pm to 10 pm

Saturday hours may be added if usage warrants.

Holiday and Intersession

Monday—Thursday	8 am to 5 pm
Friday	8 am to 4:30 pm

Summer Session

Monday, Wednesday, Thursday	8 am to 9 pm
Tuesday	8 am to 5 pm
Friday	8 am to 4:30 pm

DEVELOPMENTAL STUDIES

A significant number of incoming freshmen (full and part-time students) enter college with inadequate preparation in basic skills—reading, writing, and mathematics. Because of this, some will need more than four semesters of full-time study to earn an Associate Degree. Broome Community College takes seriously its obligation to assist students with such deficiencies. Here are some important features of our program:

Diagnostic Testing: Every entering full-time student is given a battery of diagnostic tests—one in reading, one in writing, and one in mathematics. Part-time students are also encouraged to take these tests.

Course Placement: Following an analysis of student performance on these tests, individual advice is given on course selection. Every effort is made to place students in courses in which they can succeed.

Credit/Non-Credit: Some of these courses are credit-bearing and others are not. Typically, students with skills deficiencies will have a schedule which includes both credit and non-credit courses. Students must pay close attention to catalog information pertaining to these courses and consult their curriculum chairpersons on acceptability of credit.

The Courses:	Catalog Page	Title	Credit	Comment
ENG 100	81	Basic Language Skills	3	As advised: satisfies half the composition requirement
RDG 010	100	College Reading	0	As advised
RDG 110	100	Rapid Reading	1	Elective Credit
RDG 120	100	Speed Reading	1	Elective Credit
LRS 101	100	Learning Skills: Time Scheduling & Concentration	.5	Elective Credit
LRS 102	100	Memory and Exams	.5	Elective Credit
LRS 103	101	Learning Skills: Textbook Mastery	.5	Elective Credit
LRS 104	101	Listening and Notetaking	.5	Elective Credit
MAT 003 A, B, C	87	Basic Math Review	0	As advised
CHM 102	70	Preparatory Chemistry	4	As advised
PHY 100	97	Preparatory Physics I	4	As advised
PHY 101	97	Preparatory Physics II	4	As advised
SAC 295	84	Seminar in Human Potential	3	As advised

Developmental Centers

The skills centers are staffed by experienced professionals who are knowledgeable about and committed to assisting students with their learning problems. The Learning Resource Center houses the three developmental centers:

Mathematics	—Basement
Reading	—Second Floor
Writing	—Second Floor

Counseling and Student Development Center

The Counseling and Student Development Center provides many services for students, whether they are enrolled full-time or part-time. Students can meet with counselors in a non-threatening and informal atmosphere, as they seek to develop their potential, form realistic goals, and understand themselves emotionally and intellectually. The Center is equipped to help students:

1. Understand their basic needs in terms of social, vocational and emotional adjustment to the college setting.
2. Establish realistic educational goals and appropriate methods of achieving them.
3. Assess their strengths and weaknesses to enable them to more effectively deal with academic and personal problems.
4. Better understand their role and that of the College in the higher educational process.
5. Obtain information about transfer and career opportunities, as well as assistance in dealing with academic problems.
6. Grow in their personal development and determine appropriate values through instruction in human development courses.

The Counseling and Student Development Center, located on the second floor of the Wales Building, is staffed by professional counselors and open to all BCC students, full-time and part-time. The Center is open from 8 a.m. to 4:30 p.m., Monday through Friday, and evening hours are established during the academic year. Students should become acquainted with the Center by stopping in at their convenience or calling for an appointment (772-5185). A special brochure is available at the Center, giving details about the services.

CAREER AND LIFE PLANNING

Broome Community College offers an opportunity for students to explore interests, strengths and values in both an individual and group setting. Knowing "what makes one tick" is the first step in understanding goals related to self fulfillment and to the world of work. The Counseling and Student Development Center can help in the process of self-evaluation and has a number of resources, audio-visual aids, testing procedures and techniques used in the process.

PERSONAL COUNSELING

Counseling is also available for students experiencing social, personal and family problems. Counselors may make referrals to appropriate community agencies, if that should be necessary and mutually agreeable. All counseling is strictly confidential.

ACADEMIC COUNSELING

Counselors are available to help students put their academic efforts into the proper perspective by analyzing their study, social and work habits to enable them to utilize their time in the most efficient way.

TRANSFER TO 4-YEAR COLLEGES AND UNIVERSITIES

Broome Community College has developed a fine reputation for its successful preparation of students for study at senior institutions. Students desiring to continue their education are encouraged to consult with a counselor in the Counseling and Student Development Center, their faculty advisor, or department chairperson for assistance in selecting a program and/or institution that is appropriate to their goals, abilities and aspirations.

To these ends, the College conducts the Transfer Emphasis Program, which consists of visits to the campus by representatives of four-year schools to recruit and advise potential transfer students. Taking place for two weeks, usually in November and March, these visits are designed to expedite the information process necessary to insure a smooth transition between community college and various four-year programs. The representatives, generally from admissions offices, discuss life on their campuses, financial assistance possibilities and activities available, in addition to the traditional explanations of all their academic programs.

Applications for the **State University of New York** colleges and university centers are available in the Counseling and Student Development Center. Students should apply directly to all **other colleges** (non-SUNY units) by requesting an application and any other pertinent data from the admissions office of the desired college.

All students should arrange at the BCC Registrar's Office to have copies of their transcripts forwarded to the admissions offices of the colleges to which they are applying. This will insure proper transfer of applicable credits. Any requests for references and recommendations may be forwarded to the Counseling and Student Development Center. All acceptances and rejections of applications should be reported to the Counseling and Student Development Center.

Any questions or problems regarding transfer should also be directed to the Counseling and Student Development Center, which can also help students determine if another college is accredited. For information on special transfer opportunities, see page 15.

TESTING

The Counseling and Student Development Center offers students the opportunity to engage in a testing program. When appropriate, it can be arranged for a student to take a variety of tests including personality and interest inventories. Cognitive style mapping is also available to help students better understand their individual learning preferences. The tests can help students develop self awareness and improve their decision-making ability.

HUMAN DEVELOPMENT COURSES

Courses are offered which provide students with an opportunity to examine their values, attitudes, beliefs and abilities. The courses also offer an opportunity to learn how these factors affect the quality of relationships with others. In addition, the students examine the challenge and problems of society as they relate to their development. All courses are transferable for credit.

SPECIAL WORKSHOPS AND SEMINARS

The Center offers a variety of workshops and seminars throughout the college year. Those that have been offered cover such topics as relaxation techniques, career exploration, cognitive style mapping, assertiveness training.

STUDENTS FROM OTHER NATIONS

The College welcomes and encourages qualified students from other countries to enroll and is authorized by the United States Department of Justice to issue necessary Certificates of Eligibility (Form I-20). For admissions information, these students should contact the Admissions Office at Broome Community College, P.O. Box 1017, Binghamton, New York 13902.

To be admitted to the College students from other nations must:

- Demonstrate proficiency of the English Language either by taking TOEFL examination or the Michigan Test which can be administered at the College.
- Provide an affidavit of financial support and a transcript in English (or a certified translation) of all secondary school or college work.
- Show evidence of health insurance coverage. The National Association of Foreign Student Affairs offers a health plan to meet the needs of these students, and information is available directly from insurance companies or at the Broome Community College Health Service.

No housing is provided for these students. Some local residents list available housing with the College, and students are responsible for making their own housing arrangements. It is estimated that College costs and living expenses approximate $5,000 per year.

The College provides an advisor to assist students from other countries in their orientation to student life while at Broome Community College. Both academic and non-academic problems may be discussed with the advisor, whose office is in the Wales Building, Room 210.

PROGRAM FOR PEOPLE OVER 60

Any citizen of New York State who is 60 years of age or more may "audit" courses at Broome Community College without charge, as long as there is space available. In this connection the word "audit" means these students take the course by attending classes and being exposed to all the work given in class and assigned in the text. They do not have to do the homework or take the examinations, however, and they receive no letter grade or college credit.

The BCC Counseling and Student Development Center has a counseling assistant from the Broome County Office for Aging to work with these students. The counselor helps them in registration, course selection, orientation to the College, and determining how they can benefit from and enjoy the College's courses and facilities. In demonstrating that "It's Never Too Late to Learn," they can develop their interests and explore their potential.

WOMEN'S PROGRAMMING

Broome Community College counselors are responsive to all students and, in particular, the women who make up more than 50% of the current student body. The women range in age from 16 to 72, with many of them returning to school after varying numbers of years away from the classroom.

Women can learn individually and in small groups how to begin a program, schedule it into their lives, and receive information, support and encouragement. The many counseling programs the center offers can help them achieve their academic goals, whether it be a few courses or a degree to transfer to a 4 year college or to find employment.

ORIENTATION PROGRAM

Freshman, transfer or re-admitted students will have an opportunity to participate in various advising, counseling and orientation sessions as well as social and cultural activities prior to and during the semester of acceptance into the College. Information concerning these activities will be mailed to all students prior to the beginning of the semester.

The staff of the Student Affairs Office endorses the concept that a community college environment should facilitate the development of the whole student.

PLACEMENT OFFICE

Most students who attend Broome Community College will eventually enter the labor market. Getting a job, particularly that first entry level position, requires an understanding of how to contact employers and what job hunting techniques provide the best employment success. The Placement Office not only helps you to locate positions but offers assistance in resume writing and interviewing techniques.

The Placement Office lists full-time, part-time and seasonal jobs from employers who want to hire Broome Community College students and alumni. Most of these positions are related to academic programs at the College, and they are of particular value to students wishing to gain experience in their chosen field. The New York State Employment Service "Job Bank" is also available on a daily basis in the Placement Office (Wales Building, Room 200).

The quality of the College's academic programs is well known by many companies both locally and nationally. During the spring semester of every year, representatives of business and industry visit the campus to interview potential graduates for employment purposes. Students wishing information regarding this recruiting program should contact the Placement Office.

Individual appointments can be made to discuss job market predictions, salary expectations, and other questions related to employment.

87% OF 1978 GRADUATES FOUND JOBS OR TRANSFERRED

- **TOTAL OF 822 GRADUATES,** with 81% responding to the survey. All statistics here are based on that 81% response.
- **87% OF THE 1978 GRADUATES** either found employment or transferred to 4-year colleges, thus enabling BCC to fulfill its two major missions.
  - 45% of the graduates contacted went to work.
  - 42% transferred to 4-year colleges.
  - 8% were unemployed at the time of the survey.
  - 5% were unavailable for work.
- **STARTING SALARIES** of those who went to work averaged $8,780 per year and ranged from $13,100 down to $4,920.
- **GEOGRAPHICAL BREAKDOWN—**

  73% of those who went to work found jobs in Broome County, with an additional 8½% working elsewhere in the Southern Tier. In addition, 9% got jobs elsewhere in New York State, and another 9.5% went outside the State.
- **LEADING EMPLOYERS** in order:

  Hospitals and nursing homes in Broome County
  IBM Corp.
  Retail stores in Broome County
  Day care, educational and non-profit organizations in Broome County
  Out-of-state hospitals
  Accounting and Insurance firms in Broome County
  Southern Tier and New York State hospitals
  Restaurants and fast food franchises in Broome County
  Eastman Kodak
  Banks in Broome County
  New York State Electric and Gas Corporation
  Singer Simulation Products
- **COLLEGES TO WHICH BCC GRADUATES TRANSFERRED IN 1978:**

  61% to State University of New York (SUNY) four-year colleges
  24% to private colleges in New York State
  15% to out-of-state colleges and universities

  Most popular colleges, in order:
  SUNY Binghamton
  Cortland (SUNY)
  Rochester Institute of Technology (RIT)
  Oswego (SUNY)
  Utica/Rome (SUNY)
  Oneonta (SUNY)
  Clarkson College of Technology
  Geneseo (SUNY)
  Plattsburgh (SUNY)
  SUNY Buffalo
  Cornell University
  Syracuse University

THE ACADEMIC AREAS

Here is a summary of the figures for each of Broome Community College's four academic areas. Percentages are based upon the number of graduates heard from and not the total number. Salary information is for entry level positions; those who had jobs before enrolling at BCC and kept them are not figured in

BUSINESS — 262 graduates, 54% employed, 9% unemployed, 31% transferred, 6% unavailable for work. Salary info—$7,800 average, $9,900 to $5,650 range

HEALTH SCIENCES— 162 graduates, 62% employed, 8% unemployed, 21% transferred, 9% unavailable for work. Salary info—$8,340 average, $10,000 to $6,120 range

LIBERAL ARTS—242 graduates, 20% employed, 7.5% unemployed, 71.5% transferred, 1% unavailable for work. Salary info—$6,910 average, $8,630 to $5,180 range

SCIENCE AND ENGINEERING TECHNOLOGY—157 graduates, 50% employed, 6% unemployed, 41% transferred, 3% unavailable for work. Salary info—$11,400 average, $13,000 to $9,820 range.

CURRICULUMS

Following is a summary of each curriculum in BCC's four academic areas. Percentages based on number of graduates heard from, not total number

LIBERAL ARTS

CHILD CARE—24 graduates, 30% employed, 15% unemployed, 35% transferred, 20% unavailable for work. Salary info—$6,510 average, $7,280 to $5,750 range.

CRIMINAL JUSTICE—

Associate in Arts degree—22 graduates, 25% employed, 0 unemployed, 75% transferred. Insufficient salary info available.

Associate in Applied Science degree—8 graduates, 80% employed, 20% transferred. Insufficient salary info available

ASSOCIATE IN ARTS DEGREE—175 graduates, 13% employed, 7% unemployed, 79% transferred, 1% unavailable for work. Salary info—$6,960 average, $9,010 to $4,920 range

ASSOCIATE IN SCIENCE DEGREE—13 graduates, 18% employed, none unemployed, 64% transferred. Insufficient salary info available

BUSINESS

ACCOUNTING—63 graduates, 56% employed, 10% unemployed, 29% transferred, 5% unavailable for work. Salary info—$7,760 average, $9,920 to $5,570 range.

BUSINESS ADMINISTRATION—65 graduates, 27% employed, 5% unemployed, 63% transferred, 5% unavailable for work. Salary info—$7,830 average, $10,370 to $5,290 range

GENERAL BUSINESS—29 graduates, 84% employed, 5% unemployed, none transferred, 11% unavailable for work. No salary info as these graduates were working before enrolling at BCC.

MARKETING MANAGEMENT—36 graduates, 48% employed, 10% unemployed, 31% transferred, 10% unavailable for work. Salary info—$7,810 average, $10,430 to $5,200 range

MARKETING SALES—40 graduates, 62% employed, 17% unemployed, 17% transferred, 4% unavailable for work. Salary info—$8,080 average, $10,100 to $6,030 range.

SECRETARIAL—29 graduates, 86% employed, 14% unemployed, none transferred. Salary info—$7,460 average, $9,250 to $5,680 range

HEALTH SCIENCES

DENTAL HYGIENE—23 graduates, 67% employed, 11% unemployed, 11% transferred, 11% unavailable for work. Salary info—$7,910 average, $10,300 to $5,550 range

MEDICAL LABORATORY—15 graduates, 60% employed, 13% unemployed, 27% transferred. Salary info—$8,470 average, $10,100 to $6,870 range.

MEDICAL OFFICE—17 graduates, 75% employed, 12.5% unemployed, none transferred, 12.5% unavailable for work. Salary info—$6,180 average, $6,800 to $5,570 range

MEDICAL RECORD—16 graduates, 54% employed, 15% unemployed, 15% transferred, 15% unavailable for work. Salary info—$7,360 average, $8,260 to $6,450 range

NURSING—69 graduates, 56% employed, 5% unemployed, 30% transferred, 9% unavailable for work. Salary info—$10,400 average, $12,700 to $8,100 range.

X-RAY TECHNOLOGY—22 graduates, 71% employed, 0 unemployed, 24% transferred, 5% unavailable for work. Salary info—$8,770 average, $9,300 to $8,220 range

SCIENCE AND ENGINEERING TECHNOLOGY

CHEMICAL TECHNOLOGY—25 graduates, 64% employed, 12% unemployed, 24% transferred. Salary info—$12,400 average, $12,900 to $11,900 range.

CIVIL TECHNOLOGY—17 graduates, 47% employed, 12% unemployed, 35% transferred, 6% unavailable for work. Salary info—$10,000 average, $11,270 to $8,720 range.

ELECTRICAL TECHNOLOGY—32 graduates, 70% employed, 4% unemployed, 22% transferred, 4% unavailable for work. Salary info—$11,300 average, $12,700 to $10,010 range.

ENGINEERING SCIENCE—41 graduates, 11% employed, 0 unemployed, 86% transferred, 3% unavailable for work. Insufficient salary info available.

FIRE PROTECTION TECHNOLOGY—6 graduates, 60% employed, 20% transferred, 20% unavailable for work. No entry level salaries

INDUSTRIAL TECHNOLOGY—18 graduates, 92% employed, 8% unemployed. No entry level salaries.

MECHANICAL TECHNOLOGY—18 graduates, 56% employed, 11% unemployed, 33% transferred. Salary info—$11,100 average, $13,100 to $9,020 range.

Student Affairs

Student affairs at Broome Community College fall within three primary areas of responsibility—student development, student services, and student management.

Student Development responsibilities include counseling, foreign student affairs, academic advisement, testing, freshman orientation, student activities, intercollegiate athletics, drug abuse education, leadership training, career development, veterans advisement, personal development courses, transfer advisement.

Student Services cover admissions, financial aids, placement, health services.

Student Management concerns itself with student discipline, rights, responsibilities, judicial system and grievance procedures.

Health Service

The College provides a Health Service which is available to all students. Professional staff includes a part-time physician available three mornings a week for two hours and one full-time registered nurse during regularly scheduled class periods.

The Health Service provides care of injuries and minor illness, health counseling and referral service to community resources. It is a resource area for relevant student problems, and it furnishes a non-threatening environment for personal problems. All records are confidential and health data is released only with the written authorization of the student. Common procedures performed by the Health Service include blood, urine tests, throat cultures, screening for V.D., pregnancy testing, breast exams, birth control counseling.

The Health Service is located on the first floor of the Wales Building. Cots are available for students to obtain a few quiet moments in a busy schedule.

An Emergency Squad composed of students assists the Health Service to bring quick, efficient assistance in time of an emergency. Students are encouraged to become active in this important function on campus.

Living Accommodations

The College has no dormitory facility and assumes no responsibility for student housing. As a service to students, the director of the Student Activities' Office maintains an up-to-date record of housing accommodations which landlords submit as being available. This listing is neither an approval nor rating by the College, nor will the College become a third party in any arbitration between students and landlords. Housing arrangements must be made directly by students and parents with local landlords.

Room and Board

The cost of room and board for out-of-town students is dependent upon the demands of the students. The average cost varies from $40 to $50 per week.

Veterans' Affairs

The College has maintained a Veterans' Affairs Office to provide assistance to veterans in applying for VA educational benefits and in resolving late payment problems. For information about financial aid to veterans, see the Financial Aid Office (Wales Building, Room 101).

Kinder Kare Child Care Center

Broome Community College provides child care facilities for students who are parents of young children. Called Kinder Kare, the center is located in the United Methodist Church of Nimmonsburg, which is just north of the campus. It is open for the convenience of day and evening students, whether they are enrolled full-time or part-time. The rates are reasonable, the center can be used for only three hours during any 24-hour period, and reservations must be made in advance. Kinder Kare operates according to sound educational principles and has programs for youngsters up to six years of age to help them grow and learn while they are there.

STUDENT ACTIVITIES

The College recognizes the fact that student experiences outside the classroom are important in one's over-all development. For this reason the College supports an active co-curricular program as a complement to classroom studies. The variety of activities on the campus reflects the diversification of student interest and provides the opportunity for students to develop talents, leadership ability and a sense of social responsibility.

Students should check carefully for crediting arrangements for co-curricular activities. Liberal Arts, for example, permits a maximum of six such credits to be used in meeting Associate in Arts and Associate in Science degree requirements.

United Student Government

The United Student Government is the official representative organization of the student body. As such, it is consulted by the trustees, administration, faculty and staff when student input is desired.

In order to obtain the broadest possible cross-section of the campus, membership is derived from the following areas:

A. The Freshmen and Senior class.
B. The four educational areas—Technologies, Health Sciences, Liberal Arts, Business.
C. The special interest groups—athletics, media, clubs, social activities.

Membership in the United Student Government is by campus-wide election or by appointment, as appropriate.

Some functions of the Student Government are:

1. Coordination, distribution, and supervision of funds for student activities.
2. Recommendation of policy to the College Administration via the College Senate.
3. Management of Book Store and vending operations through the Faculty-Student Association.

The United Student Government is a member of the Community College Student Association and coordinates the activities of this college with other colleges and universities statewide.

Program Board

The Program Board is one of the most active and hard working organizations on campus. The Board is responsible for sponsoring all social events as well as college hour and convocation programs. These events, including mixers, movies, coffee houses, concerts, spring picnic, semi-formals and programs featuring renowned artists and speakers, are funded with the student activity fee. The Program Board also affords students an opportunity to purchase tickets at reduced prices to a variety of programs at the Broome County Veterans Memorial Arena and the Forum and other off-campus locations.

Educational Opportunity Program (EOP)

The Educational Opportunity Program is designed for students who are economically and educationally disadvantaged. It provides economic aid and remedial and developmental assistance, with the amount of financial aid based on need. Students who do not require financial assistance under this program may benefit from the educational services offered by EOP. To be funded by EOP, students must provide appropriate income information, and all students must be New York State residents as this is a state program. The EOP Office at the College is in Room 102 of the Electrical Building—phone 772-5109.

SPECIAL SERVICES PROGRAM

The Special Services Program at Broome Community College is a federally funded program working jointly with State University of New York (SUNY) at Binghamton.

The program provides counseling services, tutorial help and information concerning other student needs. Tutoring sessions are held during the day at Broome Community College and also evenings and weekends at designated off-campus spots. The Special Services counselor is located in the Broome Community College Counseling Center in the Wales Administration Building and can be contacted at 772-5185.

The Union

The small pre-fab building on campus is known as The Union. It houses varied facilities for students to enjoy during their leisure hours. A Union Board governs the rules and regulations under which billiard and ping-pong tables, "foosball", air hockey and pin ball machines are made available to the students. For those who wish to relax, there is a lounge with fireplace, player piano, television and vending machines.

Also located in The Union are the offices of the yearbook, campus newspaper, Program Board, United Student Government, the student trustee, Clubs Council, Judicial Review Board and Student Activities.

Students laying out the pages for Fulcrum, the student newspaper, during a make-up session.

Student Center

The busiest and most versatile building on the Broome Community College campus is the Student Center. It houses the gymnasium, the College Cafeteria, Book Store, and the Little Theatre, and many of the social events are held here. This building is used by day and evening students of all curriculums.

Student Publications

The Fulcrum is the student newspaper and The Citadel the yearbook. Positions on both publications are open to all students.

The Fulcrum covers college issues both editorially and graphically. Published twice monthly, it is the principal voice of the student community. It is managed and edited by the students themselves.

The Citadel staff is involved in the development and editing of the College yearbook which reflects the unique features of the current school year, and offers a pictorial presentation of the students, faculty and staff.

Music

College Choir is sponsored jointly by the Liberal Arts Division and United Student Government. Choristers have gained an excellent reputation and are exposed to a broad range of choral literature reflecting the varied demands for community concerts. The chorus traditionally produces its own Christmas program for local television and presents an annual Spring Concert, as well as performing for local church and civic organizations. The College Choir, moreover, makes an annual concert tour to such places as Washington, D.C., or New York City. Rehearsals are held twice weekly and all students as well as faculty and staff are welcome to sing in the ensemble.

The Instrumental Music Association offers students who have previously played instruments the chance to continue their involvement in small ensembles (brass, woodwind, string and recorder) and the College Stage Band. A limited program of private coaching is also available.

The Broome Community College Theatre Company

Complementing the studio and academic course work in theatre is the Broome Community College Theatre Company. All students are invited to participate, whether or not enrolled in formal course work.

The Theatre Company enjoys a fine artistic reputation, presenting a broad range of theatrical styles, and provides its actor/technicians with varied opportunities for ensemble as well as individual training. Whether performing in the intimate setting of the college's Little Theatre, or on the road in Europe in an international festival, the BCC Theatre Company provides a challenging and exciting experience for students with an interest in the theatre.

NOTE: Students may receive transferable credit for active participation in College Choir, the Instrumental Music Association and the College Theatre Company. The conditions for this credit are available from one's advisor.

Other Clubs

In addition to the co-curricular activities already listed, other organizations are active on campus. These include:

Archery Club
Art Club
Aviation Club
Bio Club
Camera Club
Campus Bible Fellowship
Circle K
Emergency Squad
Environmental Action Club
Hockey Club
Inmate Education
Lacrosse Club
Newman Club
Outing Club
Over 21 Club
Parachute Club
Scuba Club
Ski Club
Third World

These are open to all full-time students and to part-timers who pay the student activity fee. Details are available in the Student Handbook and from the Director of Student Activities.

Professional Society Affiliates

Since exposure to organizations in their fields of study is considered of benefit to students, many curriculums have their own affiliates of national professional societies. Among these are:

Society of Manufacturing Engineers (SME) for Mechanical Technology students.

Dental Hygiene Association, an affiliate of the American Dental Hygiene Association.

Broome CC Chapter **Future Secretaries Association,** affiliated with the National Secretaries Association (International) Binghamton Chapter.

Institute of Electrical and Electronics Engineers (IEEE) for Electrical Technology students.

In addition, some meetings of local professional societies are attended by students, as the **American Chemical Society** invites Chemical Technology students to its meetings. Some professional societies hold meetings on campus, too, and students are always welcome to attend. Thus students have the opportunity to become acquainted with professional people in their fields of study and to attend lectures and see films and demonstrations of new developments.

Curriculum Organizations

In addition to the student organizations listed above that are affiliated with professional societies, the College has a number of associations that are identified with specific curriculums. Among these are the Business Club, the Civil Technology Association, the Medical Laboratory Technology Society, the Student Nurses Association, the Lively Arts from the Liberal Arts curriculum, and the Student Organization of Radiologic Technologists.

Honor Societies

Phi Theta Kappa

In 1962, the Mu Eta Chapter of Phi Theta Kappa was established at the College. Phi Theta Kappa is a national honor society at junior colleges, similar in purpose to Phi Beta Kappa at the four-year colleges and universities. Mu Eta Chapter is open to freshmen and seniors at Broome CC who have achieved outstanding academic grades, been especially active in co-curricular participation, demonstrated outstanding qualities of leadership and responsibility, and made noteworthy contributions to the College.

Sigma Phi Alpha

The national dental hygiene honor society, Sigma Phi Alpha, has a chapter at Broome CC, the Upsilon Chapter. Senior Dental Hygiene students who rank highest in scholarship and who exhibit potential qualities for future growth and attainment are selected for membership.

Tau Alpha Pi

The national honor society for students in engineering technology programs, Tau Alpha Pi has established a chapter on the Broome Community College campus. It is the Beta Theta Chapter. This society recognizes outstanding academic achievement in BCC engineering technology curriculums in Electrical, Civil, Chemical and Mechanical Technology.

Men's Sports

Broome Community College fields men's teams in seven varsity sports and competes on a club basis in ice hockey, lacrosse, snow skiing and horse show competition.

BCC athletic teams have earned an excellent reputation in two-year college competition. Included in the basketball team's more than 700 victories are 10 regional titles.

The tennis team has also been a frequent regional winner, and the baseball team has continued to be a regional power since capturing its third Region III title in 1974. The golf team had a stretch of 39 wins in 40 dual matches, and the cross country and wrestling teams have shown marked improvement and have sent competitors to recent national tournaments. The fortunes of the soccer team appear to be on the rise too.

Intramurals

Physical activity is a vital part of an individual's life, regardless of physical capability. With this in mind, the Physical Education Department coordinates an intramural program for all students enrolled at the College. Students are invited to participate in team sports such as soccer, gym hockey, basketball, volleyball and softball. For those interested in individual competition or "play for fun", sports such as tennis, golf, badminton, horseshoes and bowling are also offered.

Women's Sports

Broome Community College fields women's teams in five varsity sports—tennis, volleyball, basketball, cross-country and softball—and they have achieved some fine sports success in recent years. The tennis team has captured two regional titles and participated in national tournaments, and the volleyball team was invited to the first-ever National Junior College Volleyball Tournament.

About Broome Community College

Broome Community College is a comprehensive community college. It has programs designed to prepare graduates both for immediate employment and for transfer to four-year colleges and universities at the junior, or third-year level.

In addition to its daytime enrollment, which numbered 2,700 last year, the college has a continuing education program which had about 2,000 part-time evening students in the fall of 1978 and about 1,000 taking courses during the Summer Session.

The College is co-educational, publicly-supported, and has historically attracted about two-thirds of its student body from Broome County and one-third from outside the county. The ratio has recently been closer to 80% and 20%.

The day student body can be classified into four parts, based on study objectives—university-parallel or transfer programs, the business program, engineering and engineering technology curriculums, and health science courses.

The College is sponsored by Broome County, supervised by the State University of New York, and accredited by both professional and educational organizations (see inside front cover).

The Campus

The College campus is located three miles north of Binghamton on Upper Front Street, which is Route 11 and Route 12 at this point running alongside of Interstate 81. Nine of the 12 buildings form two contiguous quadrangles to make a compact campus layout.

Most of the buildings are two stories high, of modern functional design, and made of brick with colored panel-wall facing. They lie in a suburban setting in the virtual center of the College's 120 acres of land.

In addition to classrooms and laboratories, the campus has its own cafeteria, gymnasium and athletic fields, and a Little Theatre. These facilities add up to make the campus a multi-million dollar investment in the youth of Broome and surrounding counties.

Campus Carillon

The College has a Maas-Rowe symphonic carillon, which tolls the hours with the Westminster chimes and occasionally plays musical selections through its automatic music roll attachment. The carillon was a gift to the College, donated by former trustee Dr. Leopold Eckler and the College Foundation.

The Community

The community is an industrial and agricultural area in New York State's Southern Tier. It is in the approximate center of the state, measuring from east to west, and its southern extremity touches the Pennsylvania state line.

Binghamton is the principal city in Broome County, but it is only a part of the community known as the Triple Cities. Endicott and Johnson City, along with Vestal and other suburbs, help to make the community much larger in population and geography than the city of Binghamton.

Binghamton has a population of 64,123, yet the Triple Cities area embraces 155,522 people. The population of Broome County is 221,815. Diversified industry in the community includes such firms as IBM, General Electric, Singer Co. (formerly Link), GAF, New York State Electric & Gas Corp., and Endicott Johnson.

The College has become an integral part of the community since it was started in 1946. Many of the campus facilities are offered at nominal cost for use by responsible organizations, and most of the College's curriculums are designed to help fill the economic needs of the county.

History

The College graduated its first class in 1949. These students had entered what was then known as the New York State Institute of Applied Arts and Sciences at Binghamton in the fall of 1947. The original institute was one of five founded in the state in 1946, following the pattern of six agricultural and technical institutes which New York had established earlier in the century. The first programs offered were all occupational in nature and included Chemical, Electrical and Mechanical Technology, as well as Medical Office and Technical Office Assistant courses.

In 1953 New York relinquished operating control of the school to a new sponsor, the County of Broome, under provisions of the newly-enacted State Community College Law, and the name was changed to Broome County Technical Institute. In 1956 the name was again changed, to Broome Technical Community College, to reflect the increasingly comprehensive nature of the educational offerings. In 1971 the name became Broome Community College as the scope of the curriculums continued to expand.

The Civil Technology program was added to the five original curriculums in 1957, Dental Hygiene was introduced in 1956, and the Business programs were expanded to include offerings in Accounting, Marketing, Engineering Secretarial in the 1950's. Executive Secretarial was added in the early 1960's.

A big change in the College's programs came about in the 1950's as a result of a new emphasis on university-parallel or transfer programs to go along with the college's occupational offerings. Engineering Science, the first two years of an engineering program, was introduced in 1958, Liberal Arts and Sciences in 1962 and Business Administration in 1963.

In the late 60's interest began to develop in the health science field. As a result, the College introduced a degree-granting program in X-Ray Technology in 1965, added Medical Laboratory Technology in 1966, Nursing a year later, and Medical Record Technology in 1969. The College was responding to the changing needs of the area and adjusting its offerings to fulfill the mission of catering to the post-high school educational needs of the community.

Criminal Justice and Child Care have been added since, and degree programs in Individual Studies and in Industrial Safety and Occupational Hygiene were recently introduced, along with Office Services Assistant.

For its first five years, the school was housed in a refurbished State Guard Armory in downtown Binghamton. This building was gutted by fire in September 1951, and for the next five years Kalurah Temple and two other buildings in the city provided temporary quarters. In 1957 the College moved to its present campus on the north side of Binghamton. The first addition to the original campus came with the construction of Titchener Hall, which was dedicated in 1963. The Library Building was completed five years later, and the Business Building opened in 1972.

BOOK STORE

The College Book Store, or Campus Store as it is sometimes referred to, is located in the Student Center and actually has two areas of operation—the Textbook Department and The Campus Shop.

In the Textbook Department students may purchase their required books. To avoid standing in long lines the first week of classes, students are urged to purchase their books during the advance sale period, which immediately precedes the start of classes. It is advisable to purchase all required textbooks early in the semester. In addition to the obvious reason of using them for studying, all unsold books must be returned to the publisher shortly after the semester begins.

The Campus Shop offers a variety of items. In addition to such classroom supplies as notebooks, paper, pens and binders, there are art and drafting materials, imprinted gift items and sportswear, and an extensive selection of paperbacks.

The store manager welcomes students to speak to him about any special problems, suggestions or requests.

ALUMNI

The Broome Community College Alumni Association provides a link between the College and its Alumni, and its activities include the awarding of a number of scholarships each year and the active and monetary support of various college programs.

Any graduate may become a member by paying the modest lifetime dues of $20. There are no annual dues. Membership entitles alumni to discounts for some on-campus functions; group term/life insurance at special rates; voting eligibility for the Board of Directors including rights to stand for election to a seat on the Board. Alumni also receive the College's quarterly newsletter, BCC TODAY, and the Alumni Association conducts an annual Dinner-Dance. Alumni are encouraged to join and participate.

FACULTY-STUDENT ASSOCIATION

The Faculty-Student Association of Broome Community College, Inc., is an educational corporation designed to provide to the College, and particularly to the students and faculty, services that are not included in the regular College budget.

It provides the corporate organization through which the student fees are expended under a budget prepared by the United Student Government. It also operates the College Book Store.

Through the modest earnings of the Book Store the income from student fees is augmented to support new or special activities.

The association is governed by a board of directors elected by members who hold certain offices on campus.

The operating philosophy is to make the educational program outside of the classroom a well-rounded supplement to the academic experience of the student.

Programs of Study By Curriculum

The academic programs, whose display of courses appears on pages 28 to 51, are designed primarily for full-time students of the College. It is possible, however, for one to study for an associate degree in any of these curriculums on a part-time basis. To do this, one should contact the appropriate department chairperson. The College's programs that are intended mainly for part-time students appear on pages 55 to 62.

ACCOUNTING

DEPARTMENT CHAIRMAN, Thomas Rossi
Business Building, Room 108
Telephone 772-5133

Accounting students receive their training in such areas as intermediate accounting, cost accounting and data processing. Graduates successfully take positions in banks, industrial firms, public accounting and retail business.

FIRST YEAR
Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS	100	Accounting I	4	0	4
BUS	112	Business Mathematics	2	0	2
BUS	118	Business Law I	3	0	3
BUS	141	Marketing	3	0	3
ENG	110	Written Expression I	3	0	3
			15	0	15

Spring Semester

			Class	Lab	Credits
BUS	101	Accounting II	4	0	4
CST	110	Introduction to Data Processing	3	0	3
ENG	120	Written Expression II	3	0	3
*MAT	117	Elementary Finite Mathematics with Algebra	4	0	4
		or Liberal Arts Elective	(3)	(0)	(3)
SPK	100	Effective Speaking	2	0	2
			15–16	0	15–16

SECOND YEAR
Fall Semester

			Class	Lab	Credits
BUS	200	Intermediate Accounting I	4	0	4
BUS	205	Cost Accounting I	4	0	4
PHS	111	Physical Science for Today	2	2	3
		Social Science Elective	3	0	3
		Elect 1 of the following			
BUS	249	Personnel Management	(3)	(0)	(3)
BUS	297	Co-operative Work Experience			(1-3)
CST		A programming language course	(2)	(2)	(3)
			15–16	2–4	15–17

Spring Semester

			Class	Lab	Credits
BUS	201	Intermediate Accounting II	4	0	4
BUS	206	Cost Accounting II	4	0	4
		Elect 2 out of 3			
BUS	220	Financial Information Systems	(2)	(2)	(3)
BUS	295	Accounting Seminar	(2)	(2)	(3)
CST		A programming language course	(2)	(2)	(3)
		Social Science Elective	3	0	3
			15	4	17

*If a student has passed Mathematics 11 or intermediate algebra in high school he/she takes a Liberal Arts elective.

ACCOUNTING — BANKING EMPHASIS

FIRST YEAR
Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS	100	Accounting I	4	0	4
BUS	112	Business Mathematics	2	0	2
BUS	118	Business Law I	3	0	3
BUS	141	Marketing	3	0	3
ENG	110	Written Expression I	3	0	3
			15	0	15

Spring Semester

			Class	Lab	Credits
ECO	111	Introduction to Macro-Economics	3	0	3
BUS	101	Accounting II	4	0	4
BUS	120	Business Law II	3	0	3
ENG	120	Written Expression II	3	0	3
PSY	110	Psychology	3	0	3
			16	0	16

SECOND YEAR
Fall Semester

			Class	Lab	Credits
BUS	245	Management: A Behavioral Approach	3	0	3
CST	110	Introduction to Data Processing	3	0	3
SPK	102	Effective Speaking	3	0	3
PHS	111	Physical Science for Today	2	2	3
†ECO	253	Money and Banking	3	0	3
			14	2	15

Spring Semester

			Class	Lab	Credits
BUS	249	Personnel Management	3	0	3
BUS	224	Business Finance	3	0	3
BUS	152	Selling Fundamentals	3	0	3
		Social Science Elective	3	0	3
		*Business Elective	3–4	0	3–4
			15–16	0	15–16

*Suggested Business Electives include such American Institute of Banking (AIB) courses as Analyzing Financial Statements, Installment Credit, Principles of Bank Operations, Supervision and Personnel Administration, as well as BUS 297 Co-operative Work Experience.

†If enrollment does not justify offering daytime sections, students must attend evening classes in these subjects.

BUSINESS ADMINISTRATION

DEPARTMENT CHAIRMAN, Thomas Rossi
Business Building, Room 108
Telephone 772-5133

This program is designed specifically to prepare graduates to continue their business studies at a four-year college or university. While offering maximum transfer potential toward a Bachelor's degree in accounting or management, it still gives students preparation for employment if they decide to work instead of continuing their higher education.

Instructor working with a student on a COBOL program in a programming course in the College Computer Center.

FIRST YEAR
Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BUS 100	Accounting I	4	0	4
BUS 112	Business Mathematics	2	0	2
BUS 118	Business Law I	3	0	3
BUS 141	Marketing	3	0	3
ENG 110	Written Expression I	3	0	3
*PED	Physical Education (Selected courses)	2	0	1
		17	0	16

Spring Semester

		Class	Lab	Credits per Semester
BUS 101	Accounting II	4	0	4
†BUS 115	Business Statistics	3	0	3
	or			
†MAT 139	Algebra	(4)	(0)	(4)
BUS 120	Business Law II	3	0	3
CST 110	Introduction to Data Processing	3	0	3
ENG 120	Written Expression II	3	0	3
		16–17	0	16–17

SECOND YEAR
Fall Semester

		Class	Lab	Credits per Semester
	Elect 1 of the following 3 courses:			
BUS 200	Intermediate Accounting I	(4)	0	(4)
BUS 249	Personnel Management	(3)	0	(3)
CST 120	Computer Programming — FORTRAN	(2)	(2)	(3)
ECO 110	Introduction to Micro-Economics	3	0	3
MAT 121	Finite Mathematics	3	0	3
PHS	113 OR 115 OR 116 Physical Science — Astronomy OR Geology OR Environment	3	3	4
	Liberal Arts Elective	3	0	3
		14–16	3–5	16–17

Spring Semester

		Class	Lab	Credits per Semester
	Elect 1 of the following 3 courses:			
BUS 201	Intermediate Accounting II	(4)	0	(4)
BUS 245	Management: A Behavioral Approach	(3)	0	(3)
BUS	Business Elective	(3)	0	(3)
ECO 111	Introduction to Macro-Economics	3	0	3
MAT 122	Introduction to Calculus	3	0	3
PHS	113 OR 115 OR 116 Physical Science — Astronomy OR Geology OR Environment	3	3	4
	Liberal Arts Elective	3	0	3
		15–16	3	16–17

*An additional semester of Physical Education recommended.
†If a student has passed Mathematics 11 or intermediate algebra in high school, he/she takes Business Statistics.

CHEMICAL TECHNOLOGY

DEPARTMENT CHAIRMAN, James Spalik
Science Building, Room 108
Telephone 772-5009

The Chemical Technology curriculum is designed to meet the increasing demand for chemical technicians. Graduates of the Chemical Technology program have the education and training which qualifies them for immediate gainful employment and/or further study for advanced degrees. This background makes the Chemical Technology graduates highly sought after by employers and concurrently affords them the flexibility to advance academically.

Chemical technicians of both sexes have filled a vital manpower need in companies and organizations where background in various areas of chemistry is necessary or desirable. The constant development of new products, for example, creates a demand for chemical technicians.

Employers of chemical technicians include IBM, GAF, Eastman Kodak, Allied Chemical, DuPont, Norwich Pharmacal, General Electric, American Cyanamid, Union Carbide, Bristol Laboratories, Warner-Lambert and many other industrial firms as well as government agencies, hospitals and educational institutions.

Initial positions are usually in a research, development, process, quality control or analytical laboratory or in a pilot plant. In these positions a chemical technician may work for a senior staff member or be a member of a group working in a particular area. Experienced chemical technicians have become supervisors, group leaders, technical salesmen and research and development technicians.

This curriculum is accredited by the Engineers Council for Professional Development.

Chemical Technology student operating the mini computer keyboard of a Hewlett-Packard Model 5992A gas chromatograph-mass spectrometer, while his partner is about to inject a sample into the instrument. They are separating mixtures and determining structures of compounds in the College's Instrumental Analysis Laboratory.

FIRST YEAR
Fall Semester

		Hours per Week Class	Hours per Week Lab	Credits per Semester
ENG 100 ENG 110	Basic Language Skills or Written Expression I	3	0	3
CHM 161	Chemistry	3	3	4
MAT 141	College Algebra and Trigonometry	4	0	4
PHY 141	Physics	3	2	4
		13	5	15

Spring Semester

		Class	Lab	Credits
ENG 150	Technical Writing	3	0	3
CHM 162	Chemistry	3	3	4
MAT 142	Applied Calculus I	4	0	4
PHY 142	Physics	3	2	4
CST 122	Scientific Computer Programming — FORTRAN	2	2	3
		15	7	18

SECOND YEAR
Fall Semester

		Class	Lab	Credits
CHM 261	Organic Chemistry	3	6	5
CHM 265	Analytical Chemistry	3	6	5
CHM 271	Chemical Processes	3	4	5
	Social Science Elective	3	0	3
		12	16	18

Spring Semester

		Class	Lab	Credits
CHM 262	Organic Chemistry	3	6	5
CHM 266	Analytical Chemistry	3	6	5
CHM 272	Chemical Processes	3	4	5
	Social Science Elective	3	0	3
		12	16	18

GRADUATION REQUIREMENT: 69 CREDITS

CHILD CARE

DEPARTMENT CHAIRMAN, Francis J. Short
Department of Special Career Programs
Electrical Building, Room 102
Telephone 772-5000

This Child Care program leads to an Associate in Applied Science (AAS) degree and is designed to prepare graduates for immediate employment or, in the case of those students who are already working in the Child Care field when they enroll, to improve their capabilities and increase their opportunities for advancement. It is open to students on both a full-time and a part-time basis.

The curriculum display shown here is for full-time students, and they should be aware that careful advisement is necessary to enable them to be properly scheduled in this program on a full-load basis. Anyone interested in enrolling as a full-time student should, therefore, consult with the department chairman first. The curriculum display for part-time students appears on page 56.

Students planning to transfer to a 4-year college program in Child Care or related fields are advised to follow the sequence of courses in the Liberal Arts Division's Associate in Arts (AA) degree curriculum. See page 41.

The starting salary for graduates of the AAS degree program in Child Care who go to work immediately after graduation is between $6,800 and $10,000 a year for those who become directors and $5,000 to $7,000 for those who become teachers or teacher aids. These figures are for 10-month positions.

FIRST YEAR

Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
ENG 110	Written Expression	3	0	3
PSY 110	General Psychology	3	0	3
SOC 110	Introduction to Sociology	3	0	3
*CDC 100	Introduction to Education of Young Children	2	2	3
†CDC	Child Care Elective	2–3	2–0	3
		13–14	2–4	15

Spring Semester

		Class	Lab	Credits per Semester
ENG	English or Literature Elective	3	0	3
PSY 211	Child Development	3	0	3
*CDC 120	Curriculum Development	2	2	3
	Humanities Elective	3	0	3
	‡Related Elective	3	0	3
		14	2	15

SECOND YEAR

Fall Semester

		Class	Lab	Credits per Semester
*CDC 170	Practicum I			3
†CDC	Child Care Elective	2–3	2–0	3
	Math/Science Elective	3–4	0	3–4
†CDC	Child Care Elective	2–3	2–0	3
	‡Related Elective	3	0	3
		10–13	0–4	15–16

Spring Semester

		Class	Lab	Credits per Semester
*CDC 200	Social Psychology of Education	2	2	3
*CDC 290	Practicum II			6
†CDC	Child Care Elective	2–3	2–0	3
		7–9	2–4	15–16

***CDC COURSES ARE GIVEN MAINLY IN THE EVENING.**

†CDC electives may be taken from among CDC 115 Music for Young Children, CDC 140 Art for Young Children, CDC 150 Motor Development, CDC 160 Nutrition, CDC 210 Special Problems in Children, CDC 220 Trends in Education of Young Children, CDC 230 Working with Parents in Nursery Programs, CDC 250 Language in Early Childhood, LIT 263 Children's Literature.

‡Related electives may be taken from among PSY 212 Adolescent Development, PSY 214 Abnormal Psychology, PSY 217 Counseling and Interviewing, PSY 227 Behavior Modification, SOC 210 Crime and Deviant Behavior, SOC 230 Marriage, Family and Divorce, SAC 101 The Individual in a Changing Environment, SAC 295 Seminar in Human Potential or from other disciplines.

CIVIL TECHNOLOGY

FIRST YEAR
Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
CIV	111	Surveying I	2	6	4
CIV	115	Engineering Drawing I	1	3	2
EGR	110	Introduction to Technologies	1	0	½
ENG	110	Written Expression I or	3	0	3
ENG	100	Basic Language Skills			
MAT	141	College Algebra and Trigonometry	4	0	4
		Social Science Elective	3	0	3
			14	9	16½

Spring Semester

			Class	Lab	Credits
CIV	112	Surveying II	1	3	2
CIV	117	Architectural Drafting I	1	3	2
CIV	124	Mechanics	3	0	3
MAT	142	Applied Calculus I	4	0	4
PHY	141	Physics	3	2	4
ENG	150	Technical Writing	3	0	3
			15	8	18

SECOND YEAR
Fall Semester

			Class	Lab	Credits
CIV	215	Strength of Materials	4	0	4
CIV	217	Materials Testing	2	3	3
PHY	142	Physics	3	2	4
		Technical Electives (Choose 2)			
CIV	238	Architectural Design and Building Materials	2	3	3
CIV	235	Hydraulics	3	3	4
CST	122	Scientific Computer Programming — FORTRAN	2	2	3
MAT		Mathematics Elective	3	0	3
			13–15	7–11	17–18

Spring Semester

			Class	Lab	Credits
		Social Science Elective	3	0	3
		Technical Electives (Choose at least 13 credits)			
CIV	212	Route Surveying and Photogrammetry	3	3	4
CIV	224	Reinforced Concrete Design	2	3	3
CIV	226	Structural Steel Design	2	3	3
CIV	236	Construction Management	3	0	3
CIV	231	Estimating and Construction Planning	2	3	3
CIV	240	Soil Mechanics	2	3	3
CIV	244	Environmental Sanitation	3	0	3
MAT		Mathematics Elective	3	0	3
			13–15	6–15	16–18

GRADUATION REQUIREMENT: 67½ CREDITS

DEPARTMENT CHAIRMAN, Stephen Steele
Mechanical Building, Room 117
Telephone 772-5010

The construction industry, considering all related goods and services such as manufacturing and transportation, is the largest industry in the country. This curriculum is designed to provide the basic education for entry positions in the civil engineering and construction industries.

Graduates of this program begin their careers as engineering technicians and are qualified to work as assistants to professional and supervisory persons, such as engineers, architects, construction superintendents, surveyors and contractors. They may also find employment with agencies of the Federal, state and local governments.

Starting positions may be in drafting design, estimating, testing of materials, specification writing, inspection, surveying, sales and adjusting insurance claims. Excellent opportunities exist for advancement and promotion. The starting salaries of graduates of this program has ranged between $8,500 and $11,000.

The Civil Technology Department offers two degrees: 1) the Associate in Applied Science in Civil Technology is offered during the day. This degree is accredited by the Engineers Council for Professional Development (ECPD). 2) the Associate in Applied Science in Industrial Technology, Civil Technology major, is offered in the evening.

The energy crisis has brought a great increase in activity to make this country self-sufficient. Billions of dollars will be spent on nuclear and fossil fuel electric generating plants. Other billions of dollars will be used for clean air and water facilities.

Civil Technology instructor explaining the use of a Micro-Grade Laser System to students in a surveying class. This system is used to establish alignments and grades in construction work.

DENTAL HYGIENE

DEPARTMENT CHAIRMAN, Dr. Frederick Johnson
Science Building, Room 108
Telephone 772-5149

FIRST YEAR

Fall Semester

			Hours per Week Class	Lab	Credits per Semester
BIO	131	Human Biology I	3	2	4
DEN	101	Dental Hygiene I	2	6	4
DEN	103	Oral Anatomy and Physiology	2	4	4
ENG	110	Written Expression I	3	0	3
*MAT		Geometry Module	0	0	0
			10	12	15

Spring Semester

			Class	Lab	Credits
BIO	132	Human Biology II	3	2	4
DEN	102	Dental Hygiene II	2	8	4
DEN	105	Nutrition	3	0	3
DEN	106	Clinical Dental Radiography	1	2	2
BIO	160	Microbiology	2	3	3
SPK	102	Effective Speaking	3	0	3
			14	15	19

SECOND YEAR

Fall Semester

			Class	Lab	Credits
DEN	201	Dental Hygiene III	4	12	7
DEN	204	General and Oral Pathology	3	0	3
DEN	205	Periodontology	2	0	2
DEN	213	Public Health	3	0	3
PSY	110	General Psychology	3	0	3
			15	12	18

Spring Semester

			Class	Lab	Credits
DEN	202	Dental Hygiene IV	2	12	5
DEN	206	Dental Pharmacology	2	0	2
DEN	210	Dental Materials	2	2	3
DEN	214	Dental Specialties	2	0	2
SOC	110	Introduction to Sociology	3	0	3
			11	14	15

NOTE: The Dental Hygiene Department recommends that dental hygiene students wear safety glasses during pre-clinical and clinical procedures, especially the individual wearing contact lenses.

*This can be waived if the student has previously taken geometry or a geometry module. Geometry is a prerequisite for DEN 106 Clinical Dental Radiography.

The Dental Hygiene curriculum is designed to prepare students for the contemporary practice of dental hygiene. The curriculum emphasizes the fundamental knowledge necessary for practice in a private dental office or similar clinical setting under the supervision of a dentist.

The dental hygienist performs various preventive services, such as dental prophylaxis, topical fluoride applications, dental radiographs and instruction in plaque control procedures. Successful completion of the curriculum permits one to take the required written and practical licensure examinations.

Dental Hygiene graduates averaged $7,910 as starting salaries in 1978, encompassing a range from $10,300 to $5,550.

Students must purchase instruments and uniforms which range from $350-$400 and pay license examination fees which range from $120-$150 in addition to textbooks.

The American Dental Hygiene Aptitude test is required for all dental hygiene applicants. The test should be taken the fall prior to desired admission. Upon admission into the program all dental hygiene freshmen will be cognitively mapped to determine learning styles.

Students who wish to pursue a career as a dental hygienist in an elementary or secondary school or as a dental hygiene educator at the college level are encouraged to transfer to a baccalaureate program after graduation.

The curriculum is accredited by the Council on Dental Education of the American Dental Association.

A view of the College's Dr. James T. Ivory Dental Hygiene clinic showing Dental Hygiene students performing various services for patients, such as cleaning teeth and giving proper brushing instruction.

Electrical Technology student entering a program into one of the College's IMSAI 8080 Microcomputers.

The Electrical Technology program at Broome Community College is made up of a planned sequence of college level courses leading to the associate degree, and it is designed to prepare men and women to work in the field of engineering technology. Engineering technology is concerned primarily with the application of established scientific and engineering knowledge and methods.

The graduate of the electrical program is an electrical technician who is trained to be the interface between the graduate engineer and the skilled craftsman.

The technician translates problems into functioning equipment, using his knowledge in mathematics, electronics, circuit analysis and computer technology. He does this whether he is working in a small company as the only technician or in a large company as part of a team.

The technician works for companies like New York State Electric and Gas, International Business Machines, Xerox, Eastman Kodak, General Electric, General Aniline and Film, Universal Instruments, Raymond Corporation, National Cash Register, Bell Labs and Corning Glass. Starting positions include technical sales representative, engineering assistant, computer technician, electronics technician or laboratory, field service or test technician. Starting salaries for graduates are ranging between $10,000 and $12,700.

Many technicians find that more education is desirable. While their basic education is not transfer-oriented, graduates of Broome Community College have successfully completed advanced study at State University of NY colleges, Rochester Institute of Technology, Clarkson College of Technology, Tri-State College, University of Arizona, University of Houston, University of Miami and others.

The program is fully accredited by the Engineers Council for Professional Development.

State University of NY at Binghamton offers a Bachelor of Technology program, for which the normal admission requirement is an AAS degree in an engineering technology discipline, such as Electrical Technology.

ELECTRICAL TECHNOLOGY

DEPARTMENT CHAIRMAN, Robert Reid
Electrical Building, Room 101
Telephone 772-5017

FIRST YEAR

Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
CST	122	Scientific Computer Programming — FORTRAN	2	2	3
EET	111	Electrical Construction Laboratory I	1	3	2
EET	121	Electrical Circuits	4	3	5
EGR	110	Introduction to Technologies	1	0	½
ENG	110	Written Expression I or	3	0	3
ENG	100	Basic Language Skills			
MAT	141	College Algebra and Trigonometry	4	0	4
			15	8	17½

Spring Semester

			Class	Lab	Credits
EET	112	Electrical Construction Laboratory II	0	3	1
EET	130	Engineering Drawing	0	3	1
EET	150	Electronics I	4	3	5
EET	162	Computer Aided Network Analysis	3	0	3
ENG	150	Technical Writing	3	0	3
MAT	142	Applied Calculus I	4	0	4
			14	9	17

SECOND YEAR

Fall Semester

			Class	Lab	Credits
EET	241	Electrical Machines and Controls I	3	3	4
EET	251	Electronics II	3	3	4
PHY	141	Physics	3	2	4
EET	267	Digital Electronics and Microprocessors	3	2	4
		Social Science Elective	3	0	3
			15	10	19

Spring Semester

			Class	Lab	Credits
EET	230	Electronic Design and Fabrication	0	3	1
EET	242	Electrical Machines and Controls II	4	3	5
EET	252	Electronics III	3	3	4
PHY	144	Physics II-E	3	2	4
		Social Science Elective	3	0	3
			13	11	17

GRADUATION REQUIREMENT: 70½ CREDITS

ENGINEERING SCIENCE

DEPARTMENT CHAIRMAN, Jack Foster
Titchener Hall, Room 205D
Telephone 772-5114

The Engineering Science curriculum is designed primarily to prepare graduates to continue their studies in the various engineering disciplines at four-year colleges and universities. The strong emphasis on mathematics and physics also allows graduates to transfer to these majors at four-year institutions, with junior-year standing. In addition, there are immediate employment possibilities for qualified graduates who wish to terminate or postpone further educational goals until a more opportune time.

Broome Community College is a member of the New York State Two-Year/Four-Year Engineering College Curriculum Study Committee. The purpose of this organization is to facilitate the transfer to four-year colleges, with junior-year standing, of two-year college graduates from engineering science programs. Rensselaer Polytechnic Institute (RPI), Clarkson, Rochester Institute of Technology (RIT), Cornell, Syracuse, Union, and State University of New York at Buffalo and at Stony Brook are among the members of the Study Committee who have agreed to accept those two-year college graduates who have been recommended by their Engineering Science departments. Feedback from these and other institutions to which Broome Community College students transfer indicate a high regard for the graduates and the quality of the Engineering Science program at BCC.

Those graduates who prefer to seek immediate employment will find job opportunities as engineering technicians or as assistants to engineers involved in research and development. In addition, employment opportunities also exist which involve the application of mathematics and computer programming.

Students entering Broome Community College who wish to continue studying for their bachelor's degrees in engineering, applied mathematics, or physics will find the Engineering Science program the most appropriate course of study. As a reasonable guideline for successful achievement in this rigorous program, a student's course work in high school should be above the 80% level in all areas.

FIRST YEAR

Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
CHM 145	Chemistry	3	3	4
MAT 171	Engineering Calculus with Analytic Geometry I	4	0	4
MET 115	Graphics	1	2	2
PHY 181	Engineering Physics I	3	2	4
	English or Literature Elective	3	0	3
		14	7	17

Spring Semester

		Class	Lab	Credits
CHM 146	Chemistry	3	3	4
CST 124	Computer Programming for Engineers	2	2	3
MAT 172	Engineering Calculus with Analytic Geometry II	4	0	4
PHY 182	Engineering Physics II	3	2	4
	English or Literature Elective	3	0	3
		15	7	18

SECOND YEAR

Fall Semester

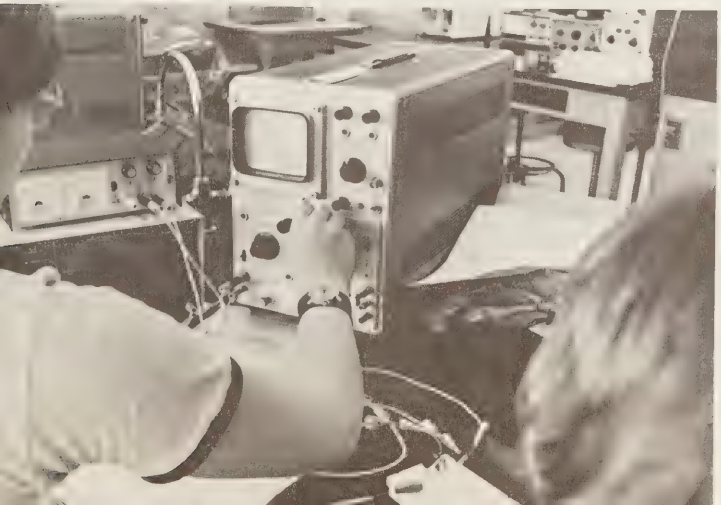
		Class	Lab	Credits
*EGR 281	Mechanics: Statics	3	0	3
EGR 285	Electrical and Electronic Circuits	3	0	3
EGR 287	Engineering Science Laboratory I	0	3	1
MAT 271	Engineering Calculus with Analytic Geometry III	4	0	4
PHY 281	Engineering Physics III	3	0	3
PED	Physical Education Elective	0	2	1
	Social Science Elective	3	0	3
		16	5	18

Spring Semester

		Class	Lab	Credits
*EGR 282	Mechanics: Dynamics	3	0	3
EGR 286	Engineering Analysis	1	0	1
EGR 288	Engineering Science Laboratory II	0	3	1
MAT 272	Differential Equations with Linear Algebra	4	0	4
PHY 282	Engineering Physics IV	3	0	3
PED	Physical Education Elective	0	2	1
	Social Science Elective	3	0	3
		14	5	16

*Or approved Engineering optional course

GRADUATION REQUIREMENT: 69 CREDITS



Student doing a circuits experiment in the College's Senior Engineering Science Laboratory.

INDIVIDUAL STUDIES

DEPARTMENT CHAIRMAN, Francis J. Short
Department of Special Career Programs
Electrical Building, Room 102
Telephone 772-5000

To better meet the changing times and to provide an opportunity for students with unusual needs, Broome Community College allows selected students the opportunity to take a personally planned degree program. This program requires that the student develop, with an advisor, an "area of concentration." This area of concentration must be a cohesive body of knowledge which the student can justify as having both educational and personal relevance.

Completion of the Individual Studies Program can lead to an Associate in Science (AS) or Associate in Applied Science (AAS) degree, depending on the student's area of concentration. The AS degree program is designed for maximum transfer possibilities, and the AAS degree program has better immediate employment opportunities. Admission into the program requires development of a Plan of Studies which is approved by the department chairman.

Associate in Science Degree
(60 credits)

- 30 Credits in English, Humanities, Natural Sciences, Mathematics and Social Sciences.
- 30 Credits in student's Area of Concentration

Associate in Applied Science Degree
(60 credits)

- Minimum of 20 semester credits in Liberal Arts and Sciences to include:
  - 6 Credits in Humanities (maximum of 3 hours in Speech)
  - 6 Credits in Social Science
  - 8 Credits in Natural and Physical Science, including Mathematics
- 10 Credits of Technical Electives
- 30 Credits in student's Area of Concentration

For additional information contact the Department Chairman.

LIBERAL ARTS AND SCIENCES

DIVISION DEAN, George Higginbottom
Titchener Hall, Room 108
Telephone 772-5031

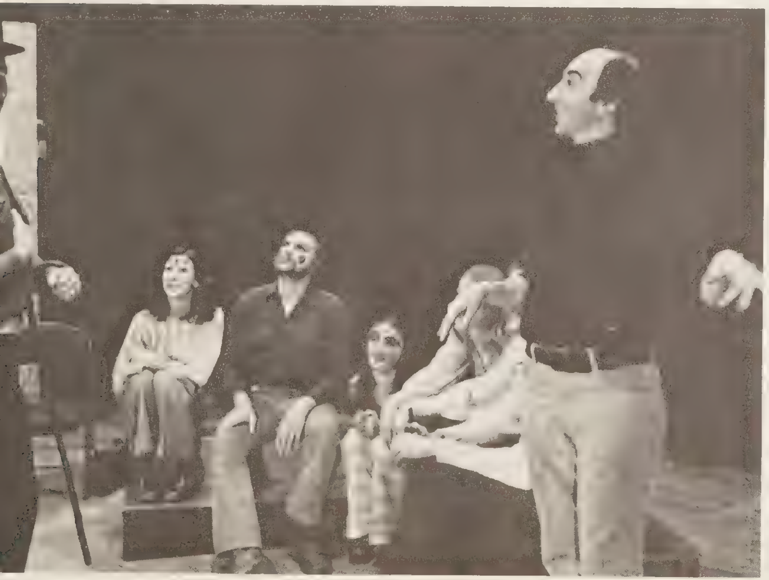
The Liberal Arts curriculum is mainly a two-year university-parallel program designed especially for those who wish to continue their college education at a four-year school. Graduates of the College in its Liberal Arts program receive either the Associate in Arts or Associate in Science degrees, depending on which course of study they complete.

Students completing this curriculum, its science option or its other emphases will have a breadth of education that prepares them for many professional careers. The Science Option, for example, is excellent for those planning careers in forestry, chemistry, biology or other scientific areas. Those aspiring to become teachers, doctors, dentists, lawyers, pharmacists or law-enforcement officers will find alternatives in the Liberal Arts curriculum designed especially for them.

Students should be aware that many of these alternative curriculums presume a high level of preparation in the secondary school, and they should consult with faculty advisors or counselors when there is doubt about the adequacy of their pre-college academic background.

To qualify for any degree at Broome Community College, students must present a cumulative grade point average of 2.0 or above.

Liberal Arts students in a Theater class.



Career Preparation

For a great number of careers a rich background in liberal studies, as is presented in the Associate in Arts (AA) and Associate in Science (AS) degree programs, is essential. Students are urged to utilize the college resources thoroughly, and as early as practicable, in locating useful information about their intended academic majors and their career aspirations.

The Liberal Arts advisement system is one which aims to match students with advisors who share their interests. If questions pertaining to career preparation, transfer opportunities and job placement cannot be answered by the faculty advisors, students will be directed to somebody who can. Key figures in the advisement picture are:

Academic Advisor — Counselor — Placement Officer

To start students thinking about a career and the preparation needed, a number of fields which suggest a Liberal Arts beginning is listed below. The college does not offer courses in all these areas, and in some cases the professional courses are taught at the junior/senior level in baccalaureate programs.

- Advertising
- Architecture
- Art
- Child Care
- Communications
- Community/Human Service
- Computing
- Counseling
- Criminal Justice
- Data Processing
- Design
- Energy Research
- Environmental Affairs
- Foreign Service
- Government Service
- Home Economics
- Interior Design
- International Business
- Labor Relations
- Library Science
- Management
- Medicine
- Oceanography
- Optometry
- Personnel
- Public Relations
- Public Service
- Publishing
- Real Estate
- Recreation
- Social Work
- Scientific Research
- Sports Writing
- Teaching
- Technical Writing
- Translating
- Transportation
- Travel/Tourism
- Urban Planning

Communication With Students

The division maintains Bulletin Boards in the Titchener Hall lobby and outside the office in Titchener Hall, Room 108. Students are urged to check the boards regularly for information pertaining to academic advisement, career planning, cultural events, transfer opportunities, convocations and lectures, concerts, and the like. Important notices and messages for students will also be posted. **Check the boards!**

Distribution Requirements

The State University of New York requires that within the Liberal Arts portion of every degree program there be "reasonable" balance among three component areas — humanities, social sciences, science/mathematics.

Below are listed the Liberal Arts disciplines and their catalog designators, the groupings A, B, and C corresponding to the three categories noted above. This is for reference when choosing elective courses for the program models presented on the following pages.

Group A
(Humanities)
Art (ART)
English (ENG)
French (FRE)
German (GER)
Italian (ITA)
Literature (LIT)
Music (MUS)
Philosophy (PHI)
Spanish (SPA)
Speech (SPK)
Theater (THR)

Group B
(Social Sciences)
Anthropology (ANT)
Economics (ECO)
Geography (GEO)
History (HIS)
Political Science (POS)
Psychology (PSY)
Social Science (SOS)
Sociology (SOC)

Group C
(Science and Math)
Biology (BIO)
Chemistry (CHM)
Mathematics (MAT)
Physics (PHY)
Physical Science (PHS)

Academic Advisement

FULL-TIME STUDENTS

Every full-time student is assigned a faculty advisor. During the first few weeks of classes, students should meet with their advisors to discuss academic and career plans.

Students are *encouraged* to meet regularly with their advisors thereafter. All students are required to complete in the presence of their advisors a Registration Advisement Form prior to registering in subsequent semesters.

The Liberal Arts office personnel is available to deal with special problems relating to academic requirements and transfer. While the faculty and staff will make every reasonable effort to help students with academic planning, students must also assume responsibility for their programs and, particularly, in meeting degree requirements.

PART-TIME STUDENTS

Part-time day students who intend to matriculate in a degree program sponsored by the Liberal Arts Division should come to the office (Room 108 in Titchener Hall) to be assigned academic advisors. Students not interested in a degree, but, nevertheless, seeking academic advice, may do so in the Liberal Arts office. Part-time evening students will be advised by representatives from the Office of Continuing Education.

Transfer

Students who have earned A.A. or A.S. degrees at Broome Community College and who intend to go on for baccalaureate degrees are guaranteed transfer to a four-year college or university of the State University of New York (SUNY). There is no guarantee, however, that students can complete all degree programs at transfer institutions in four semesters.

Students are urged to learn as much as they can relative to program requirements at the institution(s) to which they might transfer. For example, many four-year schools require foreign language. The decision to take a language at Broome Community College might thus be influenced by whether or not it is required at the college to which one intends to transfer.

The Liberal Arts Division is in the process of establishing guaranteed transfer arrangements with other public and private colleges. Inquiries about these agreements, some in force and some in progress, should be made in Titchener Hall, Room 108.

LIBERAL ARTS AND SCIENCES

Associate In Arts Degree

	Credits Required Per Year
Written Expression (as advised)	6
History (HIS 100 plus an elective)	6
Mathematics or elective (as advised) Students who have completed fewer than 3 units of secondary school mathematics (through Intermediate Algebra) are required to take a minimum of 2 semesters of college level mathematics. ...Students who have completed 3 units of secondary school mathematics (through Intermediate Algebra) are required to take one semester of college level mathematics.... Students who have completed more than 3 units of secondary school mathematics (including Intermediate Algebra) are not required to take additional mathematics. They may, however, elect an appropriate math course or an elective in another field.	0–8
Laboratory Science A full-year *sequence* of biology, chemistry, physics or physical science. Students may defer this course until the second year and choose an elective instead in the first year. Acceptable sequences: (BIO 111-112; BIO 131-132; CHM 141-142; CHM 145-146; PHY 161–162; PHS 113, 115, 116)	8
Philosophy or Foreign Language Students are encouraged to take both, but they must complete a year (6–8 credits) of philosophy or a foreign language.	6–8
Physical Education No more than 2 credits can be used to fulfill degree requirements.	2
Literature	6
Social Science Courses designated by these letter symbols: (ANT, ECO, GEO, POS, PSY, SOC, SOS)	6
Electives A maximum of 15 credits may be taken outside the offerings of the Liberal Arts and Sciences Division with the approval of the Dean of the LA Division.	14–24
Total number of credits	64 minimum

Science Option

Associate in Science Degree

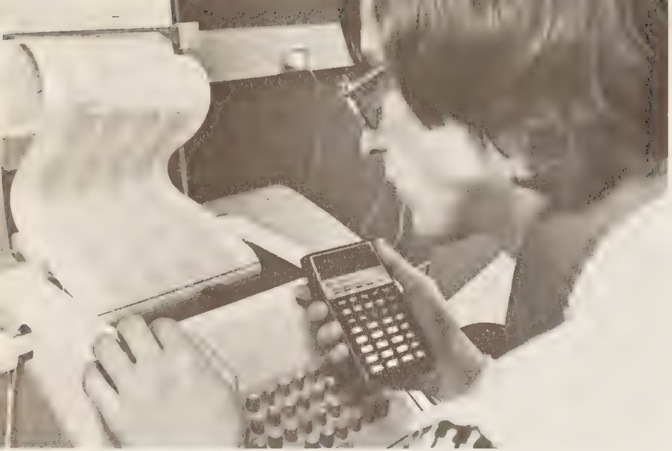
FIRST YEAR
FALL AND SPRING SEMESTERS

	Credits Required Per Year
Written Expression (as advised)	6
History (HIS 100 plus an elective)	6
Mathematics or Philosophy or Foreign Language Students who have not passed Advanced Algebra or its equivalent in high school (usually 3½–4 units) should take Algebra and Trigonometry or Pre-Calculus the first year followed by a year of Calculus with Analytic Geometry in the second year. Students must have the equivalent of Calculus with Analytic Geometry to take the non-math elective.	6–8
2 Sciences *Sequences* in biology, chemistry, physics or physical science to be taken for each of the 2 science requirements. (Recommended: BIO 111, 112; CHM 145-146; PHY 161-162; CHM 245-246)	16
Physical Education (Can be deferred to second year)	2

SECOND YEAR
FALL AND SPRING SEMESTERS

Literature	6
Social Science Courses designated by these letter symbols: (ANT, ECO, GEO, POS, PSY, SOC, SOS)	6
2 Sciences *Sequences* in biology, chemistry, physics or physical science to be taken for each of the 2 science requirements. At least 8 hours must be beyond the introductory level.	16
Mathematics or LA Elective Elective must be philosophy or a foreign language unless one of these was taken in the first year. Mathematics may be elected only with the Dean's approval if the Calculus and Analytic Geometry requirement was met in the first year.	6–8
Total number of credits	72 minimum

LIBERAL ARTS AND SCIENCES



A student in the Math-Computer Science Program illustrating two aids used for solving mathematical problems—the computer and hand-held calculator.

Math-Computer Science Emphasis
(Associate in Science Degree)

This program can lead to interesting and challenging careers in computer science, mathematics or operations research. Electives must be approved by one's advisor and should be chosen with the student's career goal and transfer institution in mind.

FIRST YEAR
Fall Semester

		Credits
ENG 110	Written Expression I (as advised)	3
	Social Science Elective (ECO 110 Micro-economics suggested)	3
MAT 163	Calculus with Analytic Geometry I	4
MAT 151	Mathematical Modeling I	4
PED	Physical Education	1
		15

Spring Semester

		Credits
LIT	Literature Elective	3
	Social Science Elective (ECO 111 Macro-economics suggested)	3
MAT 164	Calculus with Analytic Geometry II	4
MAT 252	Mathematical Modeling II	4
PHI 202	Logic	3
PED	Physical Education	1
		18

SECOND YEAR
Fall Semester

		Credits
	Laboratory Science Sequence	4
HIS 100	Rise of the West	3
	Approved Electives	6–8
	*Elective	3–4
		16–18

Spring Semester

		Credits
	Laboratory Science Sequence	4
MAT 264	Linear Algebra	4
	Approved Electives	3–4
	*Elective	4
		15–16

***Electives to be chosen from this list.**

MAT 263	Calculus with Analytic Geometry III
MAT 266	Introduction to Higher Mathematics
MAT 243	Differential Equations
CST 110	Introduction to Data Processing
CST 112	Computer Logic
CST 118	Computer Programming — COBOL
CST 124	Computer Programming for Engineers (FORTRAN IV)
CST 126	Assembly Programming — BAL
CST 130	PL/1
CST 200	Systems Analysis
CST 205	Advanced FORTRAN with Graphics

GRADUATION REQUIREMENT: 64 Credits

Mental Health & Retardation Emphasis
(Associate in Science Degree)

This course of study is for students who wish to transfer to upper division degree programs in mental health and human services, and for those seeking entry level preparation for positions in appropriate public and private agencies. Broad preparation during the first year is followed by greater concentration during the second year.

The number of students permitted to enter the second year of the program is limited by the availability of field placement openings in local agencies. Selection will take place during the spring semester of the Freshman year. Students who do not qualify can still complete A.A. degree requirements within the normal two-year period. For further details inquire at the Liberal Arts Division office in Titchener Hall.

FIRST YEAR
Fall Semester

		Credits
ENG 110	Written Expression I	3
MAT 124	Statistics	3
HIS 100	Rise of the West	3
	Laboratory Science (BIO 131 Human Biology I recommended)	4
PSY 110	General Psychology	3
PED	Physical Education Elective	1
		17

Spring Semester

ENG 120	Written Expression II	3
SOC 110	Introduction to Sociology	3
PHI 206	Social/Political Philosophy	3
	Laboratory Science (BIO 132 Human Biology II recommended)	4
	*Elective	3
PED	Physical Education Elective	1
		17

SECOND YEAR
Fall Semester

		Credits
PSY 223	Intelligence and the Mentally Retarded	3
PSY 217	Counseling and Interviewing	3
	Elective from Group A (page 38)	3
SOS 288	Seminar in Community Social Service Organizations	3
	Elective	3
		15

Spring Semester

PSY 227	Behavior Modification	3
PSY 214	Abnormal Psychology	3
	Elective	3
	Elective	3
SOS 290	Social Science Field Work	3
		15

Non-Liberal Arts choices are also acceptable with approval from the Liberal Arts Office.

MODEL CAREER PROGRAMS

The following programs are shown as typical "models" for the careers indicated and should not be regarded as inflexible in the courses cited. These models are designed to give a student a chance to earn the Associate in Arts or the Associate in Science degree at BCC, so that he/she can continue at a four-year college or university in pursuit of a baccalaureate degree in the particular field.

BUSINESS (A.A. Degree)
(For transfer to SUNY Binghamton and other SUNY units)

FIRST YEAR **Courses (Credit)**	**SECOND YEAR** **Courses (Credits)**
Written Expression (6)	Literature (6)
History (6)	Science (8)
Mathematics (6-8)	Economics (6)
Philosophy or Foreign Language (6-8)	Management and Organization (2)
Accounting (8)	Behavioral Management (3)
Physical Education (2)	FORTRAN (3)
	Elective (3)

PRE-LAW (A.A. Degree)

FIRST YEAR **Courses (Credits)**	**SECOND YEAR** **Courses (Credits)**
Science (8)	Political Science (3)
Written Expression (6)	Social Science (6)
History (6)	Literature (6)
Foreign Language (8)	Philosophy (3)
Mathematics (3-6)	Electives (12-15)
Physical Education (2)	

CRIMINAL JUSTICE (A.A. Degree)

FIRST YEAR **Courses (Credits)**	**SECOND YEAR** **Courses (Credits)**
Written Expression (6)	Political Science (3)
History (6)	Literature (6)
Mathematics (3-6)	Chemistry (8)
Introduction to Sociology (3)	Philosophy (6)
General Psychology (3)	3 Criminal Justice Courses (9)
2 Criminal Justice Courses (6)	Elective (3)
Physical Education (2)	

PRE-MEDICAL or PRE-DENTAL (A.S. Degree)

FIRST YEAR **Courses (Credits)**	**SECOND YEAR** **Courses (Credits)**
Biology (8)	Organic Chemistry (10)
Chemistry (8)	Physics (8)
Written Expression (6)	General Psychology (3)
Calculus (8)	Social Science Elective (3)
History (6)	Literature (6)
Physical Education (2)	Foreign Language (8)

PRE-PHARMACY (A.A. Degree)

FIRST YEAR **Courses (Credits)**	**SECOND YEAR** **Courses (Credits)**
Biology (8)	Organic Chemistry (10)
Chemistry (8)	Physics (8)
Written Expression (6)	Economics (3)
History (6)	Social Science Elective (3)
Calculus (8)	Foreign Language (8)
Physical Education (2)	Literature (6)

MUSIC (A.A. Degree)

FIRST YEAR **Courses (Credits)**	**SECOND YEAR** **Courses (Credits)**
Written Expression (6)	Literature (6)
Humanities or Italian (6-8)	Science (8)
Mathematics (3-6)	Music Theory (6)
Introduction to Music (3)	Social Sciences (6)
Instrumental Music (2)	Instrumental Music (2)
History (6)	Elective (3)
Physical Education (2)	

PHYSICAL EDUCATION (A.A. Degree)

FIRST YEAR **Courses (Credits)**	**SECOND YEAR** **Courses (Credits)**
Written Expression (6)	Literature (6)
Human Biology (8)	Psychology (3)
Philosophy or Language (6-8)	Social Science Elective (3)
History (6)	Effective Speaking (3)
Mathematics (3-6)	Human Biology (8)
Physical Education (2)	Electives (6-9)

JOURNALISM (A.A. Degree)

FIRST YEAR **Courses (Credits)**	**SECOND YEAR** **Courses (Credits)**
Written Expression (6)	Literature (6)
History (6)	Psychology (3)
Philosophy or Language (6-8)	Sociology (3)
Science (8)	Social Problems (3)
Mathematics (3-6)	Political Science (3)
Physical Education (2)	Technical Writing (3)
	Electives (12)

RECREATION LEADERSHIP (A.A. Degree)

FIRST YEAR **Courses (Credits)**	**SECOND YEAR** **Courses (Credits)**
Written Expression (6)	Literature (6)
Human Biology (6)	Child Development (3)
Philosophy or Spanish (6-8)	Psychology (3)
Mathematics (3-6)	Adolescent Psychology (3)
History (6)	Introduction to Sociology (3)
Physical Education (2)	Art or Music (3)
	Electives (9)

FORESTRY TECHNOLOGY (A.A.S. Degree)

By arrangement with the State University College of Environmental Science and Forestry (N.Y. State Ranger School at Wanakena), a two-year program leading to the Associate in Applied Science degree.

FIRST YEAR AT BCC

- Written Expression
- General Biology
- Mathematics
  - College Algebra and Trigonometry
- Economics
- Effective Speaking
- Geology
- Technical Writing

SECOND YEAR AT WANAKENA CAMPUS*

Apply during Senior Year in High School to SUNY — N.Y. State Ranger School, Wanakena Campus, Wanakena, N.Y. 13695 and at Broome Community College informing both institutions of interest to complete first year at BCC.

*Degree conferred at Wanakena

CHILD CARE (A.A. Degree)

FIRST YEAR **Courses (Credits)**	**SECOND YEAR** **Courses (Credits)**
Written Expression (6)	Literature (6)
General Psychology (3)	Philosophy or Language (6-8)
Introduction to Sociology (3)	History (6)
Mathematics (3-6)	Social Psychology of Education (3)
Human Biology (8)	2 Child Care Courses (6)
Introduction to Education of Young Children (3)	Elective (3)
Curriculum Development (3)	
Physical Education (2)	

THEATER (A.A. Degree)

FIRST YEAR **Courses (Credits)**	**SECOND YEAR** **Courses (Credits)**
Written Expression (6)	Literature (6)
Introduction to Theater (3)	Psychology (3)
BCC Theater (2)	Social Science Elective (3)
Mathematics (3-6)	Science (8)
Humanities or Language (6-8)	Acting (3)
Physical Education (2)	Children's Theater (3)
History (6)	Electives (6)
Acting (3)	

PRE-EDUCATION (A.A. Degree)

FIRST YEAR **Courses (Credits)**	**SECOND YEAR** **Courses (Credits)**
Written Expression (6)	Literature (6)
Science (8)	Psychology (3)
Philosophy or Language (6-8)	Sociology (3)
Mathematics (3-6)	Philosophical Issues (3)
History (6)	Electives (15)
Physical Education (2)	

SPECIAL EDUCATION (A.A. Degree)

FIRST YEAR **Courses (Credits)**	**SECOND YEAR** **Courses (Credits)**
Written Expression (6)	Literature (6)
History (3)	History (3)
Philosophy (6)	Psychology Elective (3-6)
Mathematics (3-6)	Effective Speaking (3)
Human Biology (8)	Fine Arts (6)
Physical Education (2)	Electives (6)
Psychology (3)	

ART (A.A. Degree)

FIRST YEAR **COURSES (Credits)**	**SECOND YEAR** **Courses (Credits)**
Written Expression (6)	Literature (6)
Introduction to Art (3)	History (6)
Studio Art (6)	Human Biology (8)
Humanities (6)	Studio Art (6)
Mathematics (6)	Sculpture (3)
Physical Education (2)	Psychology (3)
Physical Anthropology (3)	

PHYSICAL THERAPY (A.A. Degree)

FIRST YEAR **Courses (Credits)**	**SECOND YEAR** **Courses (Credits)**
Written Expression (6)	Literature (6)
Trigonometry and/or Elective (6-8)	Psychology Electives (6)
General Psychology (3)	Physics (8)
General Biology (8)	History (6)
General Chemistry (8)	Electives (3-5)
Physical Education (1)	Physical Education (1)

ENVIRONMENTAL SCIENCE AND FORESTRY (A.S. Degree)
(For transfer to SUNY-Syracuse Campus)

FIRST YEAR **Courses (Credits)**	**SECOND YEAR** **Courses (Credits)**
Written Expression (6)	Literature (6)
Biology (8)	Macro-Economics (3)
Chemistry (8)	Social Science Elective (3)
Calculus (8)	Physics (8)
History (6)	Organic Chemistry (10)
Physical Education (2)	Philosophy or Language (6-8)

MARKETING

DEPARTMENT CHAIRMAN, Thomas Rossi
Business Building, Room 108
Telephone 772-5133

The study of Marketing at Broome Community College covers four emphases — management, sales, insurance, real estate. While the programs are specifically designed to place graduates in the job market, about 35% transfer to four-year colleges. The Management Emphasis is the most transferable of these job-oriented emphases. Students who know at the outset that they plan to transfer should follow the Business Administration Program described on page 29.

Mid-management employment positions are found in sales and other aspects of marketing services as well as managerial training programs in retail, wholesale and industrial organizations. Starting salaries for graduates last year ranged up to $10,430 and down to $5,200 with the average pay $7,900. Cooperative education opportunities exist in these programs, and considerable background pertaining to self-employment is incorporated within the subject matter.

MANAGEMENT EMPHASIS

FIRST YEAR

Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS	100	Accounting I	4	0	4
BUS	112	Business Mathematics	2	0	2
BUS	118	Business Law I	3	0	3
BUS	141	Marketing	3	0	3
ENG	110	Written Expression I	3	0	3
			15	0	15

Spring Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS	101	Accounting II	4	0	4
BUS	120	Business Law II	3	0	3
ENG	120	Written Expression II	3	0	3
*MAT	117	Elementary Finite Mathematics with Algebra	4	0	4
		or			
		Liberal Arts Elective	(3)	0	(3)
ECO	110	Micro Economics	3	0	3
			16–17	0	16–17

SECOND YEAR

Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS	115	Business Statistics	3	0	3
BUS	152	Selling Fundamentals	3	0	3
BUS	245	Management: A Behavioral Approach	3	0	3
CST	110	Introduction to Data Processing	3	0	3
SPK	102	Effective Speaking	3	0	3
		Social Science Elective	3	0	3
			18	0	18

Spring Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS	224	Business Finance	3	0	3
BUS	270	Decision Making	3	0	3
BUS	249	Personnel Management	3	0	3
PHS	111	Physical Science for Today	2	2	3
		Elect 1 of the following:			
CST	118	Computer Programming — COBOL	(2)	(2)	(3)
CST	120	Computer Programming — FORTRAN	(2)	(2)	(3)
		Business Elective	(3)	(0)	(3)
			13–14	2–4	15

*If a student has passed Mathematics 11 or Intermediate Algebra in high school, he/she takes a Liberal Arts elective.

SALES EMPHASIS

FIRST YEAR

Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS	100	Accounting I	4	0	4
BUS	112	Business Mathematics	2	0	2
BUS	118	Business Law I	3	0	3
BUS	141	Marketing	3	0	3
ENG	110	Written Expression I	3	0	3
			15	0	15

Spring Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS	120	Business Law II	3	0	3
BUS	129	Consumer Behavior	3	0	3
BUS	152	Selling Fundamentals	3	0	3
BUS	249	Personnel Management	3	0	3
ENG	120	Written Expression II	3	0	3
			15	0	15

SECOND YEAR

Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS	229	Advertising	4	0	4
CST	110	Introduction to Data Processing	3	0	3
SPK	102	Effective Speaking	3	0	3
PHS	111	Physical Science for Today	2	2	3
BUS		Business Elective	3	0	3
ECO	110	Micro Economics or	3	0	3
SOC	110	Introduction to Sociology			
			18	2	19

Spring Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS	157	Business Report Writing	3	0	3
BUS	242	Marketing Seminar	3	0	3
BUS	245	Management: A Behavioral Approach	3	0	3
BUS	264	Retailing	3	0	3
		Liberal Arts Elective	3	0	3
PSY	110	Psychology or	3	0	3
PSY	100	Psychology of Personal Adjustment			
			18	0	18

MARKETING
INSURANCE EMPHASIS

FIRST YEAR
Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS	100	Accounting I	4	0	4
BUS	112	Business Mathematics	2	0	2
BUS	118	Business Law I	3	0	3
BUS	141	Marketing	3	0	3
ENG	110	Written Expression I	3	0	3
			15	0	15

Spring Semester

			Class	Lab	Credits per Semester
ECO	111	Introduction to Macro-Economics	3	0	3
BUS	120	Business Law II	3	0	3
BUS	165	Principles of Insurance	3	0	3
ENG	120	Written Expression II	3	0	3
PSY	110	Psychology	3	0	3
			15	0	15

SECOND YEAR
Fall Semester

			Class	Lab	Credits per Semester
†BUS	166	Property & Casualty Insurance	3	0	3
BUS	245	Management: A Behavioral Approach	3	0	3
CST	110	Introduction to Data Processing	3	0	3
SPK	102	Effective Speaking	3	0	3
PHS	111	Physical Science for Today	2	2	3
			14	2	15

Spring Semester

			Class	Lab	Credits per Semester
BUS	152	Selling Fundamentals	3	0	3
BUS	224	Business Finance	3	0	3
BUS	249	Personnel Management	3	0	3
		Social Science Elective	3	0	3
		*Business Elective	3–4	0	3–4
			15–16	0	15–16

*Suggested Business Electives include BUS 262 Small Business Management, BUS 229 Advertising, BUS 115 Business Statistics, BUS 247 Sales Management, BUS 170 Insurance for Agents and Brokers, BUS 297 Co-operative Work Experience.

†If enrollment does not justify offering daytime sections, students must attend evening classes in these subjects.

Marketing students during a sales presentation being televised on the College's closed-circuit television for playback critiquing.

REAL ESTATE EMPHASIS

FIRST YEAR
Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS	112	Business Mathematics	2	0	2
BUS	100	Accounting I	4	0	4
BUS	118	Business Law I	3	0	3
BUS	141	Marketing	3	0	3
ENG	110	Written Expression I	3	0	3
			15	0	15

Spring Semester

			Class	Lab	Credits per Semester
ECO	111	Macro-Economics	3	0	3
BUS	160	Real Estate Principles	3	0	3
BUS	120	Business Law II	3	0	3
ENG	120	Written Expression II	3	0	3
PSY	110	Psychology	3	0	3
			15	0	15

SECOND YEAR
Fall Semester

			Class	Lab	Credits per Semester
BUS	245	Management: A Behavioral Approach	3	0	3
CST	110	Introduction to Data Processing	3	0	3
SPK	102	Effective Speaking	3	0	3
PHS	111	Physical Science for Today	2	2	3
†BUS	162	Real Estate Investments	3	0	3
			14	2	15

Spring Semester

			Class	Lab	Credits per Semester
BUS	249	Personnel Management	3	0	3
BUS	224	Business Finance	3	0	3
BUS	152	Selling Fundamentals	3	0	3
		Social Science Elective	3	0	3
		*Business Elective	3–4	0	3–4
			15–16	0	15–16

*Suggested Business Electives include BUS 262 Small Business Management, BUS 229 Advertising, BUS 247 Sales Management, BUS 125 Real Estate Law, BUS 297 Co-operative Work Experience.

†If enrollment does not justify offering daytime sections, students must attend evening classes in these subjects.

MECHANICAL TECHNOLOGY

DEPARTMENT CHAIRMAN, Herbert Durst
Mechanical Building, Room 117
Telephone 772-5023

The continuing thrust for faster and more economical manufacturing methods, more reliable systems and the need for new, clean and consistent sources of energy has generated an increased demand for mechanical technicians with a high degree of technical competence.

The curriculum outline of courses encompasses a blend of mathematics, science, English, social science and technical specialties conceived to generate the necessary background for a variety of entry positions in Mechanical Technology. These entry positions usually align closely with and support mechanical engineering or related functions.

Recent graduates have been employed in areas of design-drafting, product design, quality control, metallurgy, heat-power, purchasing, sales, technical writing and system maintenance. They could be hired as technicians in quality control, mechanical research, maintenance, customer engineering or in technical sales. Job opportunities exist both locally and nationally, and starting salaries for 1978 graduates averaged $11,100.

Recruitment of graduates for employment by companies large and small is active year-round. Mechanical Technology is a particularly lucrative field for the female. Although few have ventured into the field, those who have are highly successful and happy.

This curriculum is accredited by the Engineers Council for Professional Development.

State University of NY at Binghamton offers a Bachelor of Technology program, for which the normal admission requirement is an AAS degree in an engineering technology discipline, such as Mechanical Technology.

FIRST YEAR

Fall Semester

			Hours per Week Class	Hours per Week Lab	Credits per Semester
EGR	110	Introduction to Technologies	1	0	½
MAT	141	College Algebra and Trigonometry	4	0	4
MET	113	Engineering Drawing I	1	2	2
MET	121	Manufacturing Processes I	2	2	3
PHY	141	Physics	3	2	4
ENG	110	Written Expression I or	3	0	3
ENG	100	Basic Language Skills			
		Social Science Elective	3	0	3
			17	6	19½

Spring Semester

			Class	Lab	Credits
MAT	142	Applied Calculus I	4	0	4
MET	114	Engineering Drawing II	1	2	2
MET	122	Manufacturing Processes II	1	3	2
MET	132	Applied Mechanics	4	0	4
PHY	142	Physics	3	2	4
ENG		English Requirement	3	0	3
			16	7	19

SECOND YEAR

Fall Semester

			Class	Lab	Credits
CST	122	Scientific Computer Programming — FORTRAN	2	2	3
EET	185	Electricity	2	3	3
MET	235	Strength of Materials	2	3	3
MET	241	Fluid Mechanics and Thermodynamics	2	3	3
MET	261	Engineering Statistics, Quality Control and Reliability	2	2	3
		Social Science Elective	3	0	3
			13	13	18

Spring Semester

			Class	Lab	Credits
EET	186	Electronics	2	3	3
MET	238	Mechanical Design	3	3	4
MET	252	Engineering Materials and Industrial Processes	3	3	4
MET	244	Thermodynamics	2	3	3
		*Technical Elective	(2–3)	(2–0)	(3)
			10–13	12–14	14–17

*Waiver of the elective is possible only with the approval of the Department Chairperson. It is not a degree requirement.

GRADUATION REQUIREMENT: 70½ CREDITS

Mechanical Technology student running an efficiency test on an internal combustion engine in the College's Thermodynamics Laboratory.

MEDICAL LABORATORY TECHNOLOGY

DEPARTMENT CHAIRMAN, George Ferrari
901 Front Street
Telephone 772-5067

The demand for medical laboratory technicians continues to increase, with the majority finding employment in hospital clinical laboratories and in analytical, control and research laboratories of chemical and pharmaceutical companies. Others are employed as research assistants at large universities and still others have continued their higher education toward the baccalaureate in this field at a four-year college or university.

Some graduates also become quality control technicians or laboratory technicians. The salary range for graduates of the Class of 1978 was between $10,100 and $6,870.

To provide the background necessary for work in these areas, the program includes courses in chemistry, physiology, microbiology and physics.

Extensive laboratory work in bioanalytical procedures, chemical instrumentation, microbiological and serological techniques and radiation physics helps to develop the skill needed for a wide range of job opportunities.

Work in the sciences is balanced by a program in general education including social sciences, English, and mathematics.

Satisfactory completion of 12 weeks of summer clinic experience is required. While there is no salary or direct credit associated with this experience, it is a vital and integral part of the students' educational experience.

Medical Laboratory Technology student doing serial dilutions in preparing a bacterial vaccine in the College's Microbiology Laboratory.

FIRST YEAR
Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BIO	131	Human Biology I	3	2	4
CHM	131	Chemistry	3	3	4
ENG	110	Written Expression I	3	0	3
MAT	124	Statistics	3	0	3
MLT	111	Introduction to Clinical Laboratory Methods and Practices	1	2	2
			13	7	16

Spring Semester

			Class	Lab	Credits
BIO	132	Human Biology II	3	2	4
BIO	150	Microbiology I	3	3	4
CHM	132	Chemistry	3	3	4
MLT	112	Hematology	2	4	3
ENG	120	Written Expression II or	3	0	3
SPK	102	Effective Speaking			
			14	12	18

Summer Term

*Summer Clinical Laboratory of 6 weeks

SECOND YEAR
Fall Semester

			Class	Lab	Credits
CHM	221	Organic Chemistry	2	3	3
MLT	211	Clinical Chemistry I	2	6	4
MLT	251	Microbiology II (Diagnostic)	3	4	4
PHY	116	Physics	2	2	3
		Social Science Elective	3	0	3
			12	15	17

Spring Semester

			Class	Lab	Credits
CHM	222	Organic Chemistry	2	3	3
CHM	224	Instrumental Analysis	2	6	4
MLT	212	Clinical Chemistry II	2	6	4
MLT	222	Clinical Physiology	2	0	2
MLT	232	Blood Banking and Serology	2	2	3
		Social Science Elective (ECO 107 Medical Economics and Law recommended)	3	0	3
			13	17	19

Summer Term

*Summer Clinical Laboratory of 6 weeks.

***GRADUATION REQUIREMENT**

MEDICAL OFFICE ASSISTANT

DEPARTMENT CHAIRPERSON, Mary Schum
Library, 2nd Floor, Room 14
Telephone 772-5128

The medical office assistant has many employment opportunities in physicians' offices and related fields. Some of these are in medical centers, nursing homes, research centers, hospital administrative offices and as a medical assistant affiliated with a school health department.

Graduates of this program in the class of 1978 averaged $6,180 as a starting salary.

Broome Community College prepares students for this career by offering specialized training that combines medical office management in administrative and clinical areas with laboratory procedures.

In addition to basic knowledge of such skills as typing, accounting and office procedure, the assistant will have technical background in such subjects as anatomy, physiology, microbiology, pharmacology and chemistry. Courses in English and social sciences provide a general background. Laboratory procedures of a physician's office such as urinalysis, hematology, electrocardiography, audiography and eye refractions complete the program of studies.

Students gain practical experience in administrative responsibilities, clinical laboratory procedures and assisting the physician in medical offices two days a week during the last semester of the senior year.

The Medical Office Assistant Program is accredited by the Council on Medical Education of the American Medical Association in collaboration with the American Association of Medical Assistants. Graduates may become fully certified by taking the Medical Assistants Certification Examination.

Medical Office Assistant student doing a laboratory analysis in a Medical Assisting Procedures class.

FIRST YEAR
Fall Semester

			Hours per Week Class	Lab	Credits per Semester
BIO	131	Human Biology I	3	2	4
ENG	110	Written Expression I	3	0	3
MOA	102	Medical Assisting Science	2	0	2
MOA	112	Standard First Aid and Personal Safety	0	2	1
MRT	105	Medical Terminology	2	0	2
*SEC	101 or 102	Typewriting	2	3	3
			12	7	15

Spring Semester

			Class	Lab	Credits
BIO	132	Human Biology II	3	2	4
ENG	120	Written Expression II	3	0	3
MOA	115	Medical Assisting Procedures	3	2	4
MRT	107	Medical Transcription	0	4	2
MRT	115	Medical Terminology	2	0	2
			11	8	15

SECOND YEAR
Fall Semester

			Class	Lab	Credits
BIO	160	Microbiology	2	3	3
MOA	206	Medical Office Management	3	3	4
MOA	211	Medical Assisting Procedures	2	4	4
PSY	110	Psychology	3	0	3
SPK	102	Effective Speaking	3	0	3
			13	10	17

Spring Semester

			Class	Lab	Credits
ECO	107	Medical Economics and Law	3	0	3
MOA	201	Medical Assisting Procedures	2	4	4
MOA	245	Directed Practice	1	16	5
MOA	210	Pharmacology	2	0	2
			8	20	14

*Based on placement test

A student operating a computer terminal in the College's Medical Record Laboratory as a classmate observes.

MEDICAL RECORD TECHNOLOGY

DEPARTMENT CHAIRPERSON, Mary Rosato
Business Building, Room 031
Telephone 772-5051

A medical record is the permanent report of a person's illness or injury kept to preserve information of medical, scientific and legal value. The record includes all medical reports which describe how the patient's illness was diagnosed and treated. Medical records are needed to help doctors diagnose and treat future illness, to verify insurance claims, to plan hospitals, to inform the public health officials, and to aid researchers.

The medical record technician works in the medical record department of a hospital, clinic, nursing home, school of veterinary medicine or other health facility and is responsible for many aspects of preparing, analyzing and preserving health information needed by the patients, by the hospital and by the public. The duties include reviewing medical records for completeness and accuracy and also translating diseases and operations into the proper coding symbols.

Other duties include filing medical records, preparing records for microfilming, typing reports of operations, X-rays and laboratory examinations, as well as histories, physical examinations and discharge summaries, compiling statistics of many kinds, assisting the medical staff by preparing special studies and tabulating data from records for research. Supervising the day-to-day operation of a medical record department, taking records to court and maintaining the flow of health information are also parts of the total work picture.

Practice in college medical record laboratory as well as in medical record departments of cooperating hospitals and other health care facilities, either within or outside the area, provides opportunities for additional educational experience which is the vital core of the program.

This curriculum is accredited by the Council on Medical Education of the American Medical Association and by the American Medical Record Association. Students in this program are eligible to take the Medical Record Accredition Examination following graduation and upon completion receive the title of Accredited Record Technician (ART). Salaries for 1978 graduates ranged from $8,260 to $6,450. Graduates can continue medical record education toward a baccalaureate degree at four-year colleges.

FIRST YEAR

Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BIO	131	Human Biology I	3	2	4
ENG	110	Written Expression I	3	0	3
MRT	101	Medical Record Science	2	2	3
MRT	105	Medical Terminology	2	0	2
*SEC	101 or 102	Typewriting	2	3	3
			12	7	15

Spring Semester

			Class	Lab	Credits
BIO	132	Human Biology II	3	2	4
ENG	120	Written Expression II	3	0	3
MRT	107	Medical Transcription	0	4	2
MRT	110	Medical Record Science	2	4	4
MRT	115	Medical Terminology	2	0	2
SOC		Social Science Elective	3	0	3
			13	10	18

Summer Term

†MRT 144 Directed Practice .... 40 Hours per week for 4 weeks — 4 Credits

SECOND YEAR

Fall Semester

			Class	Lab	Credits
CST	110	Introduction to Data Processing	3	0	3
SPK	102	Effective Speaking	3	0	3
MRT	202	Medical Record Science	2	2	3
MRT	208	Advanced Medical Transcription	0	3	1
MRT	216	Clinical Practicum	0	2	1
SOC		Social Science Elective	3	0	3
			11	7	14

Spring Semester

			Class	Lab	Credits
MRT	210	Medical Record Science	2	2	3
†MRT	245	Directed Practice	0	16	4
MRT	295	Medical Record Seminar	2	0	2
BIO	140	Pathophysiology	2	0	2
SOC		Social Science Elective	3	0	3
			9	18	14

*Based on Placement Test
†GRADUATION REQUIREMENT

NOTE—Some revisions were being made in this program for students entering as freshmen in the fall of 1979, when this catalog was printed. The second-year offerings for the Class of 1980 will remain as above.

NURSING

DEPARTMENT CHAIRPERSON, Sarah Hannaway
901 Front Street
Telephone 772-5059

Broome Community College offers a two-year, college-based curriculum to prepare graduates for immediate entrance into the first level of registered nursing. Graduates of this curriculum are eligible to take the New York State licensing examination for registered nurses. They are qualified for immediate employment in bedside nursing care, or they may wish to continue their education for the baccalaureate and higher degrees in the nursing field. Most graduates have recently found starting salaries between $12,700 and $8,100 a year.

The curriculum operates as a college program, with classes and laboratories held on the campus. Clinical instruction is in the cooperating hospitals of the Triple Cities. The clinical experiences, which are an integral part of the Nursing curriculum, include caring for individuals in all age groups, as well as observation periods in community health and welfare agencies.

Mature men and women are encouraged to enter this program along with recent high school graduates, whether they are married or single.

This program is accredited by the National League of Nursing.

A Nursing student checking a patient's blood pressure in one of the area hospitals.

FIRST YEAR
Fall Semester

			Hours per Week		Credits per
			Class	Lab	Semester
*ADN	100	Meeting Basic Human Needs	5	6	7
BIO	131	Human Biology I	3	2	4
ENG	110	Written Expression I	3	0	3
PSY	110	General Psychology	3	0	3
			14	8	17

Spring Semester

			Class	Lab	Credits
*ADN	101	Nursing Care During the Life Cycle	5	6	7
BIO	132	Human Biology II	3	2	4
ENG	120	Written Expression II	3	0	3
SOC	110	Introduction to Sociology	3	0	3
			14	8	17

SECOND YEAR
Fall Semester

			Class	Lab	Credits
*ADN	203	Immobility Concepts (Half Semester — 7½ weeks)	5	9	4
*ADN	204	Regulatory Concepts (Half Semester — 7½ weeks)	5	9	4
*ADN	205	Psychological Concepts I	1	3	2
BIO	150	Microbiology I	3	3	4
		Free Elective	3	0-3	3-4
			12	15-18	17-18

Spring Semester

			Class	Lab	Credits
*ADN	206	I, I and O Concepts (Half Semester — 7½ weeks)	5	9	4
*ADN	207	Oxygenation Concepts (Half Semester — 7½ weeks)	5	9	4
*ADN	208	Psychological Concepts II	1	3	2
ADN	295	Nursing Seminar	2	0	2
		Free Elective	3	0-3	3-4
			11	12-15	15-16

*Laboratory experiences for Nursing students may be scheduled during evening hours on their regular laboratory days.

OFFICE SERVICES ASSISTANT PROGRAM
Leading to Associate in Applied Science Degree
on page 51

GENERAL OFFICE CERTIFICATE PROGRAM
on page 51

RADIOLOGIC TECHNOLOGY (X-RAY)

DEPARTMENT CHAIRPERSON, Nancy Button
Business Building, Room 023
Telephone 772-5070

The radiographer finds employment in hospitals, with doctors who maintain private practices, with government agencies, both civil and military, and in industry. The work of the radiographer consists of making radiographs used in the diagnosis of disease and injury. The radiographer must also be competent in protecting the parts of the body which are not to be exposed to radiation and in operating X-ray equipment and developing film.

The Radiologic Technology program at Broome Community College consists of two academic years on campus and two summers at cooperating hospitals, the equivalent of 24 calendar months. The curriculum is an extremely active one, in which the student is responsible for maintaining academic requirements on campus as well as fulfilling the practical application of this theory at cooperating hospitals. Students should note carefully the demanding time requirements of this curriculum.

The clinical experience is a viable part of the educational process. Upon completion of 2200 hours of clinical practice as well as the academic requirements of the program, the graduate is eligible to take the New York licensing examination in October and the examination of the American Registry of Radiologic Technologists in November. Summer clinical experience is required for graduation.

This program is accredited by the Council on Medical Education of the American Medical Association and starting salaries for graduates are in the $8,000 to $10,000 range.

Students positioning a phantom patient for a radiograph in the College's Radiology Laboratory.

FIRST YEAR

Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BIO	131	Human Biology I	3	2	4
ENG	110	Written Expression I	3	0	3
RAD	100	Introduction to Radiologic Technology (Half Semester)	2	0	1
RAD	101	Radiologic Technology I	3	1	3
RAD	110	Methods of Patient Care	1	2	2
RAD	130	Directed Practice (Half Semester)	0	19	3
			12	24	16

Winterim I

*RAD 131 Extended Campus Laboratory — 40 Hours per week for 2 weeks

Spring Semester

			Class	Lab	Credits
BIO	132	Human Biology II	3	2	4
ENG	120	Written Expression II	3	0	3
PHY	117	Physics	2	2	3
RAD	102	Radiologic Technology II	3	0	3
RAD	132	Directed Practice	0	19	4
			11	23	17

Summer Term I

*RAD 133 Summer Extended Campus Laboratory — 40 Hours per week for 12 weeks

SECOND YEAR

Fall Semester

			Class	Lab	Credits
PSY	110	General Psychology	3	0	3
RAD	210	Radiologic Physics	4	0	4
RAD	220	Radiologic Pathology	2	0	2
RAD	230	Directed Practice	0	19	4
		Free Elective	3	0	3
			12	19	16

Winterim II

*RAD 231 Extended Campus Laboratory — 40 Hours per week for 2 weeks

Spring Semester

			Class	Lab	Credits
ECO	107	Medical Economics and Law	3	0	3
RAD	215	Nuclear Medicine and Radiation Therapy	1	0	1
RAD	225	Special Radiographic Procedures	3	2	4
RAD	232	Directed Practice	0	16	3
RAD	240	Radiation Health	2	1	2
RAD	295	Seminar in Radiography	2	0	2
			11	19	15

Summer Term II

*RAD 233 Summer Extended Campus Laboratory — 40 Hours per week for 12 weeks

*GRADUATION REQUIREMENT

SECRETARIAL SCIENCES

DEPARTMENT CHAIRPERSON, Marcia Kucera
Business Building, Room 108
Telephone 772-5137

Broome Community College offers three options of study in Secretarial Sciences — Engineering Secretary, Executive Secretary, and Office Services Assistant. The department also offers a one-year certificate in General Office. Graduates of the options usually obtain immediate employment as stenographers, secretaries or office assistants. Graduates a year ago averaged $7,460 as starting salaries.

Engineering Secretarial students study engineering terminology to understand the specialized language of the engineer, and they are well prepared to work on engineering reports, records and correspondence.

Executive Secretarial students study terminology in such fields as law, education, insurance, real estate and investments so that they can understand the specialized language used in the professions, as well as in government and business firms.

Office Services Assistant students study a variety of courses including accounting, typing, office management and personnel management. The graduates of the Office Services Assistant option should find employment in word processing centers and other areas of office service work.

A Secretarial Sciences student (right) entering information on the cathode ray tube text-editing screen and having the communication automatically typed by the printer in the background. Student at left is monitoring the printer. In the College's Model Office/Word Processing Center.

ENGINEERING (INDUSTRIAL) SECRETARY OPTION

FIRST YEAR

Fall Semester

			Hours per Week		Credits per
			Class	Lab	Semester
BUS	100	Accounting I	4	0	4
BUS	112	Business Mathematics	2	0	2
ENG	110	Written Expression I	3	0	3
*SEC	101 or 102	Typewriting	2	3	3
†SEC	110	Shorthand or Alternate	2–3	3–0	3
			13–14	6–3	15

Spring Semester

			Class	Lab	Credits
ENG	120	Written Expression II	3	0	3
‡SEC		Typewriting	2	3	3
		or Business Elective	(3)	(0)	(3)
SEC	111	Shorthand and Transcription	2	5	4
SPK	100	Basic Speaking	2	0	2
		Science Elective	2–3	2–0	3
			11–13	10–8	15

*Test will determine which course
†Based on student's record
‡SEC 102 or SEC 104 Typewriting must be completed

SECOND YEAR

Fall Semester

			Hours per Week		Credits per
			Class	Lab	Semester
MET	129	Survey of Engineering Laboratories	2	2	3
SEC	151	Business Communications	3	0	3
SEC	230	Advanced Shorthand	2	3	3
SEC	240	Office Practice	0	4	2
		Social Science Elective	3	0	3
		Liberal Arts Elective	3	0	3
			13	9	17

Spring Semester

			Class	Lab	Credits
SEC	212	Technical Typewriting	2	2	3
SEC	234	Specialized Dictation: Engineering	2	3	3
SEC	242	Secretarial Procedures	3	1	3
		Business Elective	3	0	3
		Social Science Elective	3	0	3
SEC	260	Model Office	0	4	2
			13	10	17

EXECUTIVE SECRETARY OPTION

FIRST YEAR

Fall Semester

			Hours per Week		Credits per
			Class	Lab	Semester
BUS	100	Accounting I	4	0	4
BUS	112	Business Mathematics	2	0	2
ENG	110	Written Expression I	3	0	3
*SEC	101 or 102	Typewriting	2	3	3
†SEC	110	Shorthand or Alternate	2–3	3–0	3
			13–14	6–3	15

Spring Semester

			Class	Lab	Credits
ENG	120	Written Expression II	3	0	3
‡SEC		Typewriting	2	3	3
		or Business Elective	(3)	(0)	(3)
SEC	111	Shorthand and Transcription	2	5	4
SPK	100	Basic Speaking	2	0	2
		Science Elective	2–3	2–0	3
			11–13	10–8	15

*Test will determine which course
†Based on student's record
‡SEC 102 or SEC 104 Typewriting must be completed

SECOND YEAR

Fall Semester

			Class	Lab	Credits
BUS	118	Business Law I	3	0	3
ECO	110	Introduction to Micro-Economics	3	0	3
SEC	151	Business Communications	3	0	3
SEC	230	Advanced Shorthand	2	3	3
SEC	240	Office Practice	0	4	2
SEC	260	Model Office	0	4	2
			11	11	16

Spring Semester

			Class	Lab	Credits
ECO	111	Introduction to Macro-Economics	3	0	3
SEC	210	Executive Typewriting	2	2	3
SEC	232	Specialized Dictation: Executive	2	3	3
SEC	242	Secretarial Procedures	3	1	3
		Free Elective	3	0	3
		Liberal Arts Elective	3	0	3
			16	6	18

OFFICE SERVICES ASSISTANT OPTION

FIRST YEAR

Fall Semester

			Hours per Week		Credits per
			Class	Lab	Semester
BUS	100	Accounting I	4	0	4
BUS	112	Business Mathematics	2	0	2
*SEC	101 or 102	Typewriting	2	3	3
ENG	110	Written Expression I	3	0	3
		Liberal Arts Elective	3	0	3
			14	3	15

Spring Semester

			Class	Lab	Credits
BUS	101	Accounting II	4	0	4
†SEC	102	Typewriting	2	3	3
		or Business Elective	(3)	(0)	(3)
ENG	120	Written Expression II	3	0	3
SEC	151	Business Communications	3	0	3
		Science Elective	2–3	0–2	3
			14–16	0–5	16

SECOND YEAR

Fall Semester

			Class	Lab	Credits
BUS	118	Business Law I	3	0	3
ECO	110	Introduction to Micro-Economics	3	0	3
CST	110	Introduction to Data Processing	3	0	3
SPK	100	Basic Speaking	2	0	2
SEC	244	Office Practice/Procedures	2	3	3
		Liberal Arts Elective	3	0	3
			16	3	17

Spring Semester

			Class	Lab	Credits
BUS	261	Office Management	2	0	2
BUS	249	Principles of Personnel Management	3	0	3
ECO	111	Introduction to Macro-Economics	3	0	3
		Business Elective	3	0	3
SEC	260	Model Office	0	4	2
		Liberal Arts Elective	3	0	3
			14	4	16

*Test will determine which course
†SEC 102 or SEC 104 Typewriting must be completed

GENERAL OFFICE CERTIFICATE PROGRAM

This one-year certificate program is designed to equip individuals with entry-level skills for placement with various business firms. Students can choose elective courses in the accounting, marketing or secretarial field to enable them to give a particular emphasis to their studies. No high school diploma is required. This program is offered by the Secretarial Sciences Department.

Such courses as Office Machines, Business Communications and Office Procedures are included, along with classes in Written Expression, Psychology and Typewriting.

Fall Semester

			Credits
*SEC	101 or 102	Typewriting	3
BUS	110	Introduction to Business	3
ENG	100	Basic Language Skills or	3
ENG	110	Written Expression I	
Elect 1 of the following			3
PSY	100	Psychology of Personal Adjustment	
PSY	110	General Psychology	
SAC	101	The Individual in a Changing Environment	
SAC	295	Seminar in Human Potential	
BUS		Business Elective	3–4
			15–16

Spring Semester

			Credits
†SEC	102	Typewriting	
or		or	3
BUS		Business Elective	
SEC	151	Business Communications	3
SEC	246	Office Machines	3
SEC	248	Office Procedures	3
BUS		Business Elective	3–4
			15–16

*A test will determine which course
†SEC 102 or SEC 104 Typewriting must be completed

Part-Time Studies (Continuing Education)

MEETING MANY NEEDS

People often think that higher education is available only for recent high school graduates. Broome Community College tries to reach out and meet the educational needs of ALL the people in Broome County. "Community" is part of the College's name and a large portion of its mission. BCC is concerned about meeting the needs of the part-time student, as well as those enrolled full time.

Anyone in the community may enroll as a part-time student, and BCC attracts a large number each year. The fall 1978 part-time enrollment, for example, was almost 2,500 men and women, most of them for evening classes as they are largely adults who work during the day. In recent years the College has also increased its enrollment of part-time day students, and the total was more than 500 last fall.

PART-TIME STUDENTS....

...are those who take fewer than 12 credits per semester, usually one or two courses. At BCC, part-time students can:

- Enroll in credit or non-credit mini courses.
- Take day courses, evening classes or both.
- Attend classes in the fall, spring or summer semester.
- Earn a degree or not, as they see fit. Certificate and diploma programs are also available.
- Apply for financial aid — if carrying more than 6 credits.
- Receive academic advice and personal counseling.
- Leave their children at Kinder Kare.
- Find other students over 21.
- Borrow books from the College Library.
- Carry one, two or three courses.
- Relax in the lounge for students over 21.
- Belong to the Evening Student Association.
- Receive Veterans' benefits.
- Transfer credits to BCC earned at another college.

Many firms have a tuition-reimbursement plan that pays all or part of an employee's tuition and costs if his/her courses are job-related.

The College conducts a special Information Session for new part-time students at the beginning of the fall and spring semesters to inform prospective students what programs are available, how to register, how to get started at BCC, and to answer their many questions.

The BCC Office of Continuing Education caters to the needs of part-time students.

BCC can design special courses for industry or community organizations or offer courses at off-campus sites — in their plant or the community.

For details on these programs, contact the Office of Continuing Education (Wales Building, Room 108 or call 772-5012).

ENROLLMENT

First-Time Enrollment

Those enrolling as part-time students for the first time at Broome Community College should be aware of the following services available to them:

- Information Sessions
- Registration
- Financial Aid
- Veterans Benefits

THE INFORMATION SESSIONS are conducted prior to each term. At this time, one can learn about the College and its programs, how to register, how to schedule courses, and how to get answers to questions.

REGISTRATION IS REQUIRED. First-time students must register, in person or by mail, and they must pay their tuition at the time they register in person or when billed if registering by mail. Registration for the fall 1979 semester is August 27 and 28, and for the spring 1980 semester it is January 14 and 15.

FINANCIAL AID is available to part-time students who take 6 or more credits. Many companies have tuition reimbursement plans, and employees should familiarize themselves with their companies' policy. The College has a Financial Aid Office in the Wales Building, Room 101 (phone 772-5028) to answer questions about this. If one's company is paying, a letter to that effect should be brought to registration.

A VETERANS AFFAIRS OFFICE is maintained in Room 201 of the Wales Administration Building for the benefit of veterans. Certificates of eligibility can be obtained there, as well as information on tutorial assistance and other benefits. One should call The Veterans Affairs Office for an appointment (772-5185).

RESIDENCY REQUIREMENTS. See page 10.

Continued Enrollment

Those who are continuing their studies at the College as part-time students should always keep in close touch with their academic advisors and follow the three-step approach shown on pages 55 to 62 for their program of study, so that they do not overlook any courses they should take.

They also are eligible for the financial aid and veterans benefits of first-time, part-time students (see above), and they have to comply with the same residency requirements. They must also register, either by mail or in person. Tuition must be paid at the time of registration, if in person, or when billed if registering by mail.

CREDIT FOR PRIOR LEARNING

Transfer Credits

- Courses completed at another college prior to enrolling at Broome Community College will be considered for transfer credits. The student, however, must initiate the request for this consideration.
- An official transcript must be on file in the Registrar's Office for all students — part-time or full — prior to transcript review for transfer purposes.
- Grades of C or better are required at another college to receive transfer credit for any course to be applied to a degree candidacy program at BCC.

Credit for Prior Non-Academic Experience

Credit may be given for life experiences or previous employment accomplishments. A number of methods exist for receiving this credit, and details are available from the Chairman of the Special Careers Program Department (Electrical Building, Room 102, Phone 772-5211).

Students may also find it advantageous to "challenge" a course, in whose field they have previous experience. They can do this by taking a special examination. If they pass this test, they can receive Credit by Examination for the course and will not have to take it, thus saving the cost of tuition and the semester(s) involved. Taking this examination for credit requires payment of a $20 fee.

SPECIAL OFFERINGS FOR PART-TIME STUDENTS

Mini-Courses

These are non-credit courses, usually three or six weeks in length, running one evening per week. They cover a wide range of topics that may be employment related, directed toward hobbies or just subjects of general interest, and they have no homework, no exams and no grades. The College publishes printed bulletins each fall and early spring with a full listing of offerings. These mini courses have attracted more than 4,000 students a year in recent years.

Workshops and Seminars

The College conducts workshops and seminars in a variety of topics throughout the year. These are intended to update job skills and explore new fields of interest. Some of the seminars have been for senior citizens, for law-enforcement personnel, for women seeking jobs and educational information, for volunteer firemen, for community agencies, and for business and industry.

Weekend Courses

These may be offered Friday and Saturday, perhaps even on Sunday, depending on the interest shown — sometimes alternate weekends, and they have the advantage of giving one a whole week to do the homework. They are usually credit courses.

TV Credit Courses

One's TV set at home is the classroom, as the class work is shown on home TV channels. The College assigns an instructor to answer students' questions and give and grade examinations. Home work and tests can be mailed to the instructor. The TV class work is once a week.

Courses by Newspaper

A number of courses is given each semester, with the class work being published in one of the local weekly newspapers. Contact with the college instructor can be made in person or by telephone, and home work and examinations are mailed in. These are credit courses.

Study Abroad

The College belongs to a consortium for international study, which offers credit courses in many countries, including England, Israel, Denmark and Canada. These courses can be for two weeks, for a whole semester or for an entire year. See page 16 for details.

Summer Session

Courses conducted during the summer present an opportunity for residents of Broome County to make up for past academic difficulties, lighten future study loads, or just take courses. One does not have to be a full-time BCC student to enroll, and both credit and non-credit courses are offered in the day and evening. The credit courses have been accepted for college credit at many colleges and universities across the country. Non-credit mini courses are given too. Special flyers are available free in the Office of Continuing Education.

Students consulting the schedule of courses during registration for evening session courses.

DISPLAY OF CREDIT PROGRAMS

Following are displays of courses for the programs that the College offers to part-time students. Most of these are given in the evening, although some are day offerings. Students who pursue these programs should meet with their academic advisors or program coordinators to determine the best approach to meeting their individual needs.

Three distinct achievement levels are displayed. **Step 1** consists of the courses required for acceptance as a degree or a diploma candidate; **Step 2** continues and adds courses required for one to earn a diploma, which is essentially one year of college level work; **Step 3** contains the additional courses required for one to earn his/her associate degree.

Those interested in earning a degree should enroll in courses required for acceptance as a degree or diploma candidate (Step 1). Then after completing those courses, he/she should follow the prescribed sequence by taking the courses in Step 2 and then Step 3. One should always consult with the advisor, too, as sometimes special course consideration is possible.

ACCOUNTING EMPHASIS
In Business
(Associate in Applied Science Degree)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
BUS 100 Accounting I	4
BUS 101 Accounting II	4
BUS 112 Business Mathematics	2
BUS 118 Business Law I	3
ENG 110 Written Expression I or ENG 100 Basic Language Skills	3
Apply for Acceptance as Degree Candidate	16

STEP II—Diploma Requirements

(Acceptance requirements—above	16)
BUS 157 Report Writing	3
Liberal Arts Elective	3
Accounting Courses	10
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above	32)
Accounting Courses	8
Business Related Courses*	8
Social Sciences	6
English Elective	3
BUS 221 Math for Business Analysis	2
or BUS 115 Business Statistics	3
PHS 112 General Physical Science (or equivalent)	2
Electives (any field)	2–3
AAS Business (Accounting Emphasis) Minimum Semester Credits	64

*Business related courses from BUS, CST, MAT, MET or SEC course numbers as approved by the Academic Advisor for Business (See course descriptions on pages 64 to 105.)

Students who have taken courses through AIB, LOMA, or other recognized national programs of study and examination should apply to the Academic Advisor for individual consideration of credit.

More Information:
James Fort, Academic Advisor, 772-5144 or 772-5008

CHEMICAL EMPHASIS
In Industrial Technology
(Associate in Applied Science Degree)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
MAT 139 Algebra	4
CHM 145 Chemistry	4
English Electives (see list below)	3
Apply for Acceptance as a Degree Candidate	11

STEP II—Diploma Requirements

(Acceptance requirements—above	11)
CHM 146 Chemistry	4
CHM 291 Organic Chemistry I	3
CHM 292 Organic Chemistry II	3
PHY 141 Physics	4
MAT 140 Trigonometry	4
CST 122 Computer Programming — FORTRAN (Technical)	3
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above	32)
PHY 142 Physics	4
CHM 293 Analytical—Instrumental Chemistry I	3
CHM 294 Analytical—Instrumental Chemistry II	3
English Electives (see list below)	3
Social Science Electives (see list below)	6
Approved Technical Science Electives (see list below)	13
AAS Industrial Technology (Chemical Emphasis) Minimum Semester Credits	64

The following may be taken as approved technical/science courses to meet degree requirements: CHM 296, CHM 297, CHM 298, MAT 142, MAT 241, CST 130, EET 111, EET 112, EET 125, EET 126, CIV 260, MET 245, MET 261, BIO 111, BIO 112

Suggested English Courses:
ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Suggested Social Science Courses:
ECO 110, ECO 111, PSY 110, SOC 110, SOS 130

More Information:
David Kenien, Academic Advisor, 772-5012
James Spalik, Chairman, 772-5009

CHILD CARE
(Associate in Applied Science Degree)

It is recommended that courses be taken in the following sequence:

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
PSY 110 General Psychology	3
PSY 211 Child Development	3
CDC 100 Introduction to the Education of Young Children	3
ENG 110 Written Expression I	3
CDC 120 Curriculum Development	3
Apply for Acceptance as Degree Candidate	15

STEP II—Diploma Requirements

(Acceptance requirements—above	15)
SOC 110 Introduction to Sociology	3
CDC 170 Practicum I	3
CDC 200 Social Psychology of Education	3
Child Care Electives (see list at right)	6
Apply for Diploma	30

STEP III—Degree Requirements

(Diploma requirements—at left	30)
English/Literature	3
Humanities Elective (see list below)	3
Math or Science Elective (see list below)	6–8
Child Care Electives (see list below)	6
CDC 290 Practicum II	6
Related Approved Electives (see list below)	6
AAS Child Care Minimum Semester Credits	60–62

CDC Electives:
Students may select 12 hours of courses designated for Child Care, such as CDC 115, CDC 140, CDC 150, CDC 160, CDC 210, CDC 220, CDC 230, CDC 250, LIT 263

Related Electives:
Students may elect 6 hours from the Related Approved Electives from the following: PSY 212, PSY 214, PSY 217, PSY 220, PSY 227, SOC 230, SOC 210, SOC 234, or from other disciplines

Elective Areas:
Suggested Humanities—select from English, Languages, Fine Arts, Philosophy, Speech (SPK 102 recommended)

Math or Science—select from Math, Biology, Chemistry, Physics, Physical Science (MAT 111, BIO 131 recommended)

More Information:
Francis J. Short, Department Chairman, 772-5000
Marilyn Schafer, Program Coordinator, messages 772-5012 or 772-5094

Evening students enjoying the break between halves of a two-hour class.

CIVIL EMPHASIS
In Industrial Technology
(Associate in Applied Science Degree)

STEP I—Courses required for Acceptance as Degree Candidate or equivalent as approved by the department

	Credits
MAT 139 Algebra	4
MAT 140 Trigonometry	4
English Elective (see list below)	3
PHY 141 Physics	4
Apply for Acceptance as Degree Candidate	15

STEP II—Diploma Requirements

(Acceptance requirements—above	15)
MET 132 Mechanics	4
CIV 155 Surveying	3
CIV 156 Route Surveying	4
CIV 159 Architectural Drafting I	3
CIV 228 Estimating and Construction Planning	3
Apply for Diploma	32

STEP III—Degree Requirements

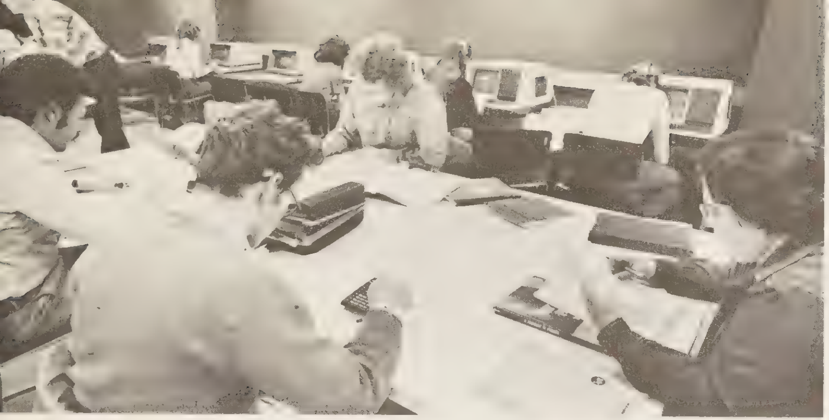
(Diploma requirements—above	32)
PHY 142 Physics	4
MET 235 Strength of Materials	3
English Elective (see list below)	3
Social Science Electives (see list below)	6
Approved Technical Electives (see list below)	16
AAS Industrial Technology (Civil Emphasis) Minimum Semester Credits	64

The following may be taken as approved technical elective courses to meet degree requirements:
CIV 160, CIV 161, CIV 163, CIV 251, CIV 252, CIV 255, CIV 257, CIV 260, CIV 262, CIV 264, CIV 266, CIV 268, CST 122, MAT 142, MAT 241, EET 111, EET 112

Suggested English Courses:
ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Suggested Social Science Courses:
ECO 110, ECO 111, ECO 104, ECO 120, PSY 100, PSY 110, SOC 110, SOS 130

More Information:
David Kenien, Academic Advisor, 772-5012
Stephen Steele, Chairman, 772-5010



Students developing FORTRAN programs in the College's Computer Center.

COMPUTER STUDIES EMPHASIS
(Leads to Business Diploma)

STEP I—Courses required for Acceptance as a Diploma Candidate

	Credits
ENG 110 Written Expression I	3
BUS 100 Accounting I	4
CST 110 Introduction to Data Processing	3
MAT 117 Elementary Finite Math with Algebra or BUS 115 Business Statistics	3
Apply for Acceptance as a Diploma Candidate	13

STEP II—Diploma Requirements

(Acceptance requirements—above	13)
Computer Languages*	6
CST 200 Systems Analysis or BUS 220 Financial Information System	3
BUS 157 Business Report Writing or BUS 158 Communications in Business	3
BUS 101 Accounting II	4
Computer Elective	3
Business Diploma (Computer Studies Emphasis)	32

*Choose from CST 122, CST 116, CST 118, CST 126, CST 130, CST 205, CST 124, CST 120

NOTE: Students planning to use the Business Diploma—Computer Studies Emphasis as part of their Associate in Applied Science Degree requirements should discuss program requirements early so that a smooth transition can be made to degree study.

More Information:
William Beston, Program Coordinator, 772-5131

COMPUTER STUDIES EMPHASIS
(Leads to Industrial Technology Diploma)

STEP I—Courses required for Acceptance as a Diploma Candidate

	Credits
English Elective	3
MAT 139 Algebra	4
CST 110 Introduction to Data Processing	3
CST 112 Computer Logic	3
Apply for Acceptance as a Diploma Candidate	13

STEP II—Diploma Requirements

(Acceptance requirements—above	13)
CST 122 Computer Programming—FORTRAN (Technical)	3
Programming Language	3
Computer Elective	3
Approved Technical Electives	10
Industrial Technology Diploma Computer Studies Emphasis	32

Approved Technical Electives:
These courses should be selected from the Industrial Technology Emphasis of interest (Chemical, Civil, Electrical, Applied Mathematics, Mechanical, Production Management)

NOTE: Students planning to use Industrial Technology Diploma—Computer Studies Emphasis as part of their Associate in Applied Science in Industrial Technology degree requirements should discuss program requirements early so that a smooth transition can be made to degree study.

More Information:
William Beston, Program Coordinator—Computer Studies, 772-5131

CRIMINAL JUSTICE
(Associate in Applied Science)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
ENG 110 Written Expression I or ENG 100 Basic Language Skills	3
SOC 110 Introduction to Sociology	3
Criminal Justice Courses	6
Apply for Acceptance as Degree Candidate	12

STEP II—Diploma Requirements

(Acceptance requirements—above	12)
PSY 110 General Psychology	3
SPK 102 Effective Speaking	3
POS 201 The American Political System or POS 204 American State & Local Government	3
Sociology Elective	3
Psychology Elective	3
Criminal Justice Courses	6
Apply for Diploma	33

STEP III—Degree Requirements

(Diploma requirements—above	33)
Lab Science or Math or Combination	6
Philosophy Elective	3
Free Electives (any field: POS recommended)	6
Criminal Justice Courses	12
AAS Criminal Justice Minimum Semester Credits	60

More Information:
Francis J. Short, Chairman, 772-5000
Pasquale Francescone, Program Coordinator, messages 772-5012

DIETETIC ASSISTANT
(Leads to Certificate)

This program is designed for individuals already employed in the food service field, as there is a requirement for supervised work experience by a Registered Dietician. All persons entering the program are responsible for finding a preceptor, and registrations are on a pre-application basis.

	Credits
DIA 101 Nutrition	3
DIA 102 Institution Food Preparation	3
DIA 201 Food Management Systems	3
DIA 202 Personnel Management	3
Apply for Certificate—Dietetic Assistant	12

More Information:
Francis J. Short, Chairman, 772-5000
Lorraine Gula, Program Coordinator, messages 772-5012

ELECTRICAL EMPHASIS
In Industrial Technology
(Associate in Applied Science)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
MAT 139 Algebra	4
MAT 140 Trigonometry	4
EET 125 Circuits I	3
ENG 110 Written Expression I	3
Apply for Acceptance as Degree Candidate	14

STEP II—Diploma Requirements

(Acceptance requirements—above	14)
EET 126 Circuits II	3
EET 245 Electrical Machines	4
MET 113 Engineering Drawing	2
CST 122 Computer Programming—FORTRAN (Technical)	3
Social Science Elective (see list below)	3
Approved Technical Electives (see list below)	3
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above	32)
EET 230 Electronic Design and Fabrication	1
EET 255 Electronics I	4
EET 256 Electronics II	4
EET 257 Electronics III	4
EET 267 Digital Electronics & Microprocessors	4
PHY 141 & PHY 142 Physics	8
ENG 150 Technical Writing	3
Social Science Elective (see list below)	3
Approved Technical Elective (see list below)	1
AAS Industrial Technology (Electrical Emphasis) Minimum Semester Credits	64

Anyone starting the Electronic sequence will be required to take EET 267

Approved Technical Electives:
EET 111, EET 112, EET 267, MAT 124, MAT 241, MAT 243, MAT 244, MAT 246, MET 245, MET 132, MET 247, MET 255, MET.261, MET 280, MET 285, MET 286, MET 287, CIV 228, CIV 268, CIV 155, CHM 145, CHM 146, CST 126, CST 130, CST 200, CST 202, CST 204, CST 205

Suggested Social Science Courses:
ECO 104, ECO 110, ECO 111, PSY 100, PSY 110, SOC 110, SOS 130

More Information:
David Kenien, Academic Advisor, 772-5012
Robert L. Reid, Chairman, 772-5017

BASIC ELECTRONICS
(Leads to Certificate)

Regional Program with Tompkins Cortland Community College in Dryden, N.Y.

The program is intended primarily for those individuals currently employed who need the background information in order to bid successfully for new jobs.

The program is not designed for transfer, but students may use courses for the Associate in Applied Science in Industrial Technology degree and some of the courses for the Associate in Applied Science in Electrical Technology at Broome Community College.

The certificate may be granted to the student by either Broome Community College or Tompkins Cortland Community College, depending upon which institution he/she matriculates into.

More Information:
Robert L. Reid, Chairman, 772-5017

	Credits
First Year	
MAT 103 Technical Mathematics*	3
EET 125 Circuits I	3
MAT 104 Technical Mathematics*	3
EET 126 Circuits II	3
Second Year	
DRAF 105 Electronics Drafting*	2
EET 255 Electronics I	4
Technical Elective	3
EET 256 Electronics II	4
Total Credits	25

*Students in other than Tompkins Cortland Community College who wish to pursue this award, should seek guidance on substitutes for these courses.

FIRE PROTECTION TECHNOLOGY
(Associate in Applied Science Degree)

The Fire Protection Technology Program is designed to provide fire fighters and related fire service personnel with specialized training. The curriculum has been developed by a local advisory committee to meet the needs of the area, and specialized courses as well as general education courses constitute the degree program. Specialized courses include Fire Fighter Tactics and Strategy, Arson Investigation, Hydraulics, Hazardous Materials, Fire Prevention, and Building Construction.

This program is open to both paid and volunteer fire fighters of the community, as well as those persons in related firematic areas.

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
ENG 110 Written Expression I	3
Fire Protection Courses	9
Apply for Acceptance as Degree Candidate	12

STEP II—Diploma Requirements

(Acceptance requirements—above	12)
SPK 102 Effective Speaking	3
Mathematics or Science Elective (see below)	3
Chemistry (see below)	3
Psychology	3
Social Sciences (see below)	3
Fire Protection Courses	3
Apply for Diploma	30

STEP III—Degree Requirements

(Diploma requirement—above	30)
Fire Protection Courses	6
Social Sciences (see below)	3
Health (see below)	3
Management	6
Electives	12
AAS Fire Protection Technology Minimum Semester Credits	60

Chemistry: Suggest CHM 125

Mathematics: Suggest MAT 139 (4 Credits)

Social Sciences: Choose from History, Anthropology, Sociology, Psychology, Political Science, Economics

Health: Advanced First Aid Emergency Medical Technician Programs or equivalent may be submitted for approval

Fire Protection Courses: Select from FRS 101, FRS 103, FRS 105, FRS 108, FRS 200, FRS 201

More Information:
Francis J. Short, Chairman, 772-5000
Ogden J. Clark, Program Coordinator, messages 772-5012

GENERAL OFFICE
(Leads to Certificate)
See page 51

This program can be taken as a full-time one-year program or taken as a part-time program either daytime or evening.

More Information:
Marcia Kucera, Chairperson, 771-5137 or 772-5008

INDIVIDUAL STUDIES
(Associate in Applied Science or Associate in Science Degrees)
See page 36

INDUSTRIAL SAFETY AND OCCUPATIONAL HYGIENE OPTION
In Industrial Technology
(Associate in Applied Science Degree)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
CHM 125 Chemistry	3
ENG 110 Written Expression I	3
MAT 139 Algebra	4
SAF Industrial Safety Courses*	3
Apply for Acceptance as Degree Candidate	13

STEP II—Diploma Requirements

(Acceptance requirements—above	13)
Social Science Elective	3
MAT 124 Statistics	3
BIO 131 Human Biology	4
SAF Industrial Safety Courses*	9
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above	32)
Social Science Electives	3
ENG 150 Technical Writing or SPK 102 Effective Speaking	3
SAF Industrial Safety Courses*	9
Technical Electives†	8
Business Electives‡	7
AAS Industrial Technology Industrial Safety and Occupational Hygiene Option Minimum Semester Credits	62

Industrial Safety Courses

*Industrial Safety courses—SAF 100 OSHA Codes and Regulations, SAF 101 Accident Investigation and Prevention, SAF 102 Design and Evaluation of Safety Program, SAF 105 Material Handling and Storage of Common and Special Products, SAF 110 Ventilation and Exhaust, SAF 111 Machine Guarding, SAF 120 Introduction to Industrial Hygiene, SAF 125 Air Sampling and Noise Surveys, SAF 130 Product Safety, SAF 250 Special Topics (1 to 3 credits), FRS 101 Fire Prevention and Protection, FRS 200 Hazardous Materials (All are 3 credits, except where marked otherwise.)

†Technical electives—MET 287 Plant Layout and Material Handling (2 credits), FRS 108 Building Construction (3 credits)

‡Business electives—BUS 118 Business Law (3 credits), BUS 150 Personnel Administration (2 credits), BUS 207 Managerial Accounting I (2 credits), BUS 252 Supervision of Personnel (2 credits).

More Information:
Francis J. Short, Chairman, 772-5000
Donald Pixley, Program Coordinator, Messages, 772-5012

Students working on design projects in an Interior Design class.

INTERIOR DESIGN
(Leads to Certificate)

This is a 30-credit program primarily for individuals currently employed by design-related firms and for whom a deeper knowledge of interior design would be personally and professionally valuable. Those whose interests in design and decorating are not job-related are also encouraged to enroll in the program. (Some of these courses have prerequisites. Consult the course listings in this catalog—pages 64 to 105.)

	Credits
INT 110 Interior Design I	4
INT 111 Interior Design II	4
INT 120 Furniture Design I	2
INT 121 Furniture Design II	2
ART 101 Introduction to Art	3
INT 101 History of Design	3
INT 140 Fabric Analysis	2
CIV 117 Architectural Drafting I	2
INT 130 Rendering	2
PSY 110 General Psychology	3
BUS 262 Small Business Management	3
	30

More Information:
Robert Keller, Program Coordinator, 772-5096 or 772-5021

LIBERAL ARTS & SCIENCES
(Associate in Arts Degree)

The Associate in Arts program is structured to allow the greatest flexibility in course selection and sequence. It is strongly recommended beginning the program by first satisfying the English requirement, i.e., 6 hours from ENG 100, ENG 110, or ENG 120.

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
Liberal Arts Courses	6
Apply for Acceptance as Degree Candidate	6

STEP II—Diploma Requirements

(Acceptance requirements—above	6)
English (Composition)	6
Approved Humanities	3
Approved Social Sciences	6
Approved Liberal Arts Courses	11
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above	32)
Remainder of degree requirements (see below)	30
AA Liberal Arts & Sciences Minimum Semester Credits	62

Minimum requirements for AA degree:

English—a minimum of 12 credits, of which 6 shall be in composition and 6 in literature

History—a minimum of 6 credits in approved courses

Humanities—a minimum of 6 credits (6 in Philosophy or 6 in a foreign language)

Mathematics—students who have completed fewer than 3 units of secondary school mathematics (through 11th year math) are required to take 2 semesters of college level mathematics • Students who have completed 3 units of secondary school mathematics (through 11th year math) are required to take one semester of college level mathematics • Students who have completed more than 3 units of secondary school mathematics (including 11th year math) are not required to take additional math. They may, however, elect an appropriate math course or an elective in another field

Natural and Physical Sciences—a minimum of 8 credits

Social Sciences—a minimum of 6 credits

Electives—minimum of 16 credits (A maximum of 15 credits may be taken outside the offerings in Liberal Arts & Sciences with the approval of the Dean of Liberal Arts)

Satisfactory completion of all courses in a curriculum or as approved in a department

More Information:
Douglas Garnar, Academic Advisor, 772-5163 or 772-5094
Dean—George Higginbottom, 772-5031

LIBERAL ARTS & SCIENCES
General Studies Emphasis
(Leads to Diploma)

	Credits
English	6
Social Sciences & Humanities	18
Approved Electives	8
Liberal Arts Diploma (General Studies Emphasis)	32

The awarding of this diploma does not necessarily mean the student is a candidate for the Associate in Arts degree. Courses must have approval of the Liberal Arts Division, however, to insure that work is appropriate for the Associate in Arts Degree.

More Information:
George Higginbottom, Dean of Liberal Arts, 772-5094

MARKETING MANAGEMENT AND SALES
General Emphasis
(Associate in Applied Science Degree)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
BUS 100 Accounting I	4
BUS 101 Accounting II	4
BUS 112 Business Mathematics	2
BUS 118 Business Law I	3
ENG 110 Written Expression I or ENG 100 Basic Language Skills	3
Apply for Acceptance as Degree Candidate	16

STEP II—Diploma Requirements

(Acceptance requirements—above	16)
BUS 157 Report Writing	3
Liberal Arts Elective	3
Business Courses*	10
Apply for Diploma in General Business	32

STEP III—Degree Requirements

(Diploma requirements—above	32)
Business Courses*	8
Business Related Courses†	8
Social Sciences	6
English Elective	3
BUS 115 Business Statistics or BUS 221 Math for Business Analysis	2-3
PHS 112 General Physical Science (or equivalent)	2
Electives (any field)	2-3
AAS in Marketing Management and Sales Minimum Semester Credits	62-64

*Business students who have taken courses through AIB, LOMA, or other recognized national programs of study and examination should apply to the Academic Advisor for individual consideration or credit.

†Business related courses from BUS, CST, MAT, MET or SEC course numbers as approved by the Academic Advisor for Business.

Suggested Management Electives: BUS 141, BUS 150, BUS 224, BUS 243, BUS 246, BUS 252, BUS 255, BUS 256, BUS 257, BUS 258, BUS 261, BUS 270, BUS 360, BUS 361, BUS 362.

Suggested Sales Electives: BUS 120, BUS 129, BUS 131, BUS 141, BUS 147, BUS 152, BUS 154, BUS 226, BUS 238, BUS 247.

More Information:
Thomas Rossi, Chairman, 772-5133
James Fort, Academic Advisor, 772-5144 or 772-5008

NOTE: A number of choices exist in The Business—General Emphasis Diploma Program. By carefully selecting the proper Business courses, students can generate a concentration in a particular area, such as Sales, Retailing or Management. To identify these courses, students should discuss their interests with their academic advisor.

The courses completed to earn the diploma are acceptable as credits toward an Associate in Applied Science degree in Marketing Management and Sales.

APPLIED MATHEMATICS EMPHASIS
In Industrial Technology
(Associate in Applied Science Degree)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
MAT 139 Algebra	4
MAT 140 Trigonometry	4
English Elective (see list below)	3
Apply for Acceptance as a Degree Candidate	11

STEP II—Diploma Requirements

(Acceptance requirements—above	11)
MAT 142 Applied Calculus I	4
MAT 241 Applied Calculus II	3
PHY 141 Physics	4
PHY 142 Physics	4
MAT 124 Statistics	3
Approved Elective (see list below)	3
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above	32)
MAT 243 Differential Equations	4
MAT 246 Applied Linear Algebra	4
CST 122 Computer Programming—FORTRAN (Technical)	3
English Elective (see list below)	3
Social Science Electives (see list below)	6
Approved Electives (see list below)	12
AAS Industrial Technology (Applied Mathematics Emphasis) Minimum Semester Credits	64

English Electives:
ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Social Science Electives:
ECO 104, ECO 110, ECO 111, PSY 100, PSY 110, SOC 110, SOS 130

Approved Electives:
MAT 244, CST 112, CST 126, CST 130, CST 200, CST 202, CST 204, CHM 145, CHM 146, CHM 291, CHM 292, CHM 293, CHM 294, CHM 296, CHM 297, CIV 155, CIV 156, CIV 251, CIV 252, EET 125, EET 126, EET 255, EET 256, EET 257, EET 258, MET 113, MET 114, MET 132, MET 235, MET 245

In recent years the demand for higher level mathematics courses has decreased. However, arrangements can be made to allow serious degree candidates to complete their requirements.

More Information:
David Kenien, Academic Advisor—Technologies, 772-5123
Mary Diegert, Chairperson, 772-5022

MECHANICAL EMPHASIS
In Industrial Technology
(Associate in Applied Science Degree)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
MAT 139 Algebra	4
MAT 140 Trigonometry	4
MET 113 Engineering Drawing I	2
English Elective (see list below)	3
Apply for Acceptance as Degree Candidate	13

STEP II—Diploma Requirements

(Acceptance requirements—above	13)
MET 121 Manufacturing Processes I	3
MET 122 Manufacturing Processes II	2
PHY 141 Physics	4
CST 122 Computer Programming—FORTRAN (Technical)	3
MET 132 Applied Mechanics	4
Approved Technical Electives (see list below)	3
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above	32)
MET 235 Strength of Materials	3
MET 253 Engineering Materials & Industrial Processes	3
MET 261 Engineering Statistics & Quality Control	3
PHY 142 Physics	4
English Elective (see list below)	3
Social Science Electives (see list below)	6
Approved Technical Electives (see list below)	10
AAS Industrial Technology (Mechanical Emphasis) Minimum Semester Credits	64

The following may be taken as approved technical elective courses to meet degree requirements:
MET 114, MET 245, MET 247, MET 249, MET 255, MET 272, MET 280, MET 285, MET 286, MET 287, EET 111, EET 112, EET 125, EET 126, EET 255, EET 256, EET 257, CIV 159, CIV 160, CIV 161, CIV 251, CIV 252, CIV 255, CHM 145, CHM 146, MAT 142, MAT 241

Suggested English Courses:
ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Suggested Social Science Courses:
ECO 104, ECO 110, ECO 111, ECO 120, PSY 100, PSY 110, SOC 110, SOS 130

More Information:
David Kenien, Academic Advisor—Technologies, 772-5012
Herbert Durst, Chairperson—Mechanical Dept., 772-5023

PARALEGAL ASSISTANT
(Associate in Applied Science Degree)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
ENG 110 Written Expression I	3
PLA 100 Introduction to Paralegal Profession I	3
PLA 101 Introduction to Paralegal Profession II	3
PSY 110 General Psychology	3
Apply for Acceptance as Degree Candidate	12

STEP II—Diploma Requirements

(Acceptance requirements—above	12)
ENG 120 Written Expression II	3
PLA 102 Introduction to Paralegal Profession III	3
PLA 120 Legal Office Procedures	3
PLA 210 Legal Drafting	3
PLA 200 Real Property Law	3
PLA 205 Techniques of Research	3
Apply for Diploma	30

STEP III—Degree Requirements

(Diploma requirements—above	30)
BUS 100 Accounting I	4
Business Elective	3
PLA 215 Estates, Probates & Trusts	3
PLA—Paralegal Electives	4
SOC 110 Sociology	3
Math/Science	6
Social Science or Humanities Elective	3
BUS 101 Accounting II	4
AAS Paralegal Assistant Minimum Semester Credits	60

More Information:
Francis J. Short, Department Chairman, 772-5000
Matthew Vitanza—Program Coordinator, (messages) 772-5012

PRODUCTION MANAGEMENT EMPHASIS
In Industrial Technology
(Associate in Applied Science Degree)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
MAT 139 Algebra*	4
MAT 140 Trigonometry*	4
MET 113 Engineering Drawing I	2
English Elective (see list below)	3
Apply for Acceptance as Degree Candidate	13

STEP II—Diploma Requirements

(Acceptance requirements—above	13)
MET 121 Manufacturing Processes I	3
MET 122 Manufacturing Processes II	2
PHY 141 Physics	4
BUS 149 Management & Organization I	2
MET 280 Management Decisions	2
MET 285 Time, Motion & Wage Study	2
Approved Electives (see list below)	4
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above	32)
CST 122 Computer Programming—FORTRAN (Technical)	3
BUS 252 Supervision of Personnel	2
MET 261 Engineering Statistics & Quality Control	3
MET 286 Production Control	2
MET 287 Plant Layout & Materials Handling	2
PHY 142 Physics	4
English Elective (see list below)	3
Social Science Electives (see list below)	6
Approved Electives (see list below)	7
AAS Industrial Technology (Production Management Emphasis) Minimum Semester Credits	64

*Must have a minimum of 4 hours of Mathematics as a requirement for the degree if background makes it unnecessary to take MAT 139 Algebra and MAT 140 Trigonometry.

The following may be taken as approved elective courses to meet degree requirements:
MET 114, MET 132, MET 235, MET 245, MET 253, MET 255, MET 272, EET 111, EET 112, EET 125, EET 126, CIV 159, CIV 160, CIV 161, BUS 118, BUS 154, BUS 243, BUS 255, MAT 142, MAT 241

Suggested English Courses:
ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Suggested Social Science Courses:
ECO 104, ECO 110, ECO 111, ECO 120, PSY 100, PSY 110, SOC 110, SOS 130

More Information:
David Kenien, Academic Advisor—Technologies, 772-5012
Herbert Durst, Chairman, 772-5023

GENERAL TECHNICAL STUDIES
In Industrial Technology
(Leads to Diploma)

	Credits
Technical Courses (in one curriculum)	12
Math & Other Technical Subjects	12
English & Other Liberal Arts Courses	8
Industrial Technology Diploma (General Technical Studies Emphasis)	32

The Industrial Technology Diploma (General Technical Studies Emphasis) offers broader topic coverage during the initial study prior to specialization within an Associate Degree program. A student must have written approval from the Academic Advisor for Technologies.

More Information:
David Kenien, Academic Advisor—Technologies, 772-5012

MINI COURSES

Mini courses are given during the fall, spring and summer semesters at Broome Community College, and they cover a wide variety of topics and subjects. These are non-credit courses, usually given one evening a week, and generally for three or six weeks.

One does not have to be a previously or currently enrolled BCC student to take a mini course, and many residents of Broome County have first been introduced to the campus by their enrollment in these courses.

About 200 mini courses are given each year, and they attract about 4,000 students altogether. The following abbreviated list of some recent offerings gives some idea of the type of courses and the range of interests covered:

Refresher Typing
Retailing
Tax Tips
Heart Attack Prevention
Saturday Trip to the Opera in NYC
Basic Color Photography
Chinese Painting
Antique Furniture
Estate Planning
How to Play Backgammon
Lip Reading
Wall Papering
Speed Reading
Anatomy of an Auto
Self-Awareness

Students in a slimnastics mini course.

Designed for the Adult

Mini courses are designed for adults interested in learning more about a subject in an informal setting. These courses have no requirements, homework, examinations or grades. They do provide a chance to expand one's knowledge in a field, brush up on a skill, explore a new hobby or craft, or assist in one's job—all in a relaxed manner.

Certificate of Participation

Certificates of Participation are given to those attending 3 out of 3 sessions, 4 out of 4 sessions or 5 out of 6 sessions. Many area employers will reimburse employees receiving a Certificate of Participation for a job-related course.

Easy Registration Procedure

Mini courses are offered continuously throughout the year. Four flyers a year list the courses, with their descriptions, times, dates, fees. A form is included in each term's flyer for easy mail-in registration, or one can register in person at any time. Registrations are accepted on a first-come, first-served basis. No phone registrations are made.

Course Development

The mini courses are a joint effort between Broome Community College faculty, community people, area agencies, organizations and business firms. Groups interested in teaching or co-sponsoring a mini course are encouraged to discuss the possibilities with the College's Office of Continuing Education. Many programs offered each year come about because someone suggested them, or a group was concerned about a real need in the community. A teaching interest and course proposal form is available for individuals wishing to teach a particular subject. These forms will be mailed upon request.

MINI COURSES AT BCC....

- Are short non-credit courses for adults.
- Are designed for leisure learning.
- Usually meet once a week.
- Last from 3 to 6 weeks.
- Begin throughout the year.
- Require no homework, no exams or grades.
- Do not require a special educational background.
- Provide learning without pressure.
- Are designed for adults interested in learning more about a subject in an informal setting.

PEOPLE TAKE MINI COURSES TO....

- Explore a new subject.
- Try out "going to college."
- Lessen anxiety while taking courses.
- Update occupational skills.
- Improve their quality of life.

Course Descriptions

All courses listed in this section are scheduled to be offered during the 1979-80 academic year, unless otherwise indicated. The offering of any course, however, is subject to sufficient enrollment. Courses numbered from 100 to 199 are generally first-year courses, and those numbered in the 200's are usually taken in the second year.

ACCOUNTING, BUSINESS ADMINISTRATION AND MARKETING COURSES

BUS 100 Accounting I **4 Credits**

Basic concepts and procedures in the accounting cycle. Emphasis on journals, ledgers and financial statements, payroll systems and merchandise inventory systems.

4 Class Hours

BUS 101 Accounting II **4 Credits**

Deferrals and accruals, plant assets and intangible assets, partnerships, corporations and manufacturing.

4 Class Hours
Prerequisite: BUS 100 Accounting I

BUS 102 Payroll Accounting **2 Credits**

A comprehensive study of Federal and State laws and regulations affecting payrolls and payroll taxes. Practical report preparation and reporting requirements. Proper accounting practices to record payroll taxes.

2 Class Hours

BUS 110* Introduction to Business **3 Credits**

General background of modern business practices through the study of organization and management, production, human resources, accounting and finance, marketing, and the information needed for control and management decisions in business and society.

3 Class Hours

BUS 112 Business Mathematics **2 Credits**

Number systems and arithmetic processes. Problems in percentage, simple interest, compound interest, discounting notes, depreciation, insurance, taxes and problems in accounting and marketing.

2 Class Hours

BUS 115 Business Statistics **3 Credits**

Concepts and mechanics of measures of central tendency, measures of dispersion, probability and correlation as they relate to general problems in business and economics.

3 Class Hours
Prerequisite: MAT 003 Basic Mathematics Review A or equivalent

BUS 118 Business Law I **3 Credits**

Law as an evolutionary and democratic process. Court structure, administrative law, law-of-contracts, legal principles of agency and partnerships.

3 Class Hours

BUS 120 Business Law II **3 Credits**

The law governing the negotiation or transfer of commercial paper and the sale of personal property. The law of personal and real property and sundry topics: bailments, insurance, landlord-tenant relationships, corporate and labor law.

3 Class Hours
Prerequisite: BUS 118 Business Law I

BUS 125* Real Estate Law **5 Credits**

For real estate people preparing for the New York State Real Estate Broker's Licensing Examination. Under the supervision of the New York State Department of Licenses. (Credits applicable only to Business program with prior approval from one's academic advisor.)

5 Class Hours

BUS 129 Consumer Behavior **3 Credits**

Emphasizes the development of how people make purchase decisions in the market place. Consumer decision-making, learning, brand loyalty and market segmentation.

3 Class Hours

***TAUGHT EVENINGS ONLY**

BUS 131 Personal Finance **3 Credits**
Guidelines to everyday financial problems regarding budgeting, installment buying, credit, insurance, taxes, savings, investments and purchasing such long-term investments as a home or automobile.
3 Class Hours

BUS 135* Investments **2 Credits**
Application of sound investment principles as they relate to stocks and bonds. Importance of the stock markets, their operation and their place in our society. Current happenings such as over-all market behavior, stock splits, rights and offerings will be studied in various companies, making the subject matter current and relevant to financial events of the day. A model portfolio approach with weekly review by class participants.
2 Class Hours

BUS 138* Income Tax I **1 Credit**
Basic Federal income tax rules and regulations for the preparation and filing of personal income tax forms. Personal exemptions, exemptions for dependents, gross income inclusions and exclusions, itemized and standard deductions, tax tables and rates.
1 Class Hour

BUS 139* Income Tax II **1 Credit**
Preparation of personal income tax returns involving more complicated items, such as capital gains and losses, rental property, dividends, other income and special deductions.
1 Class Hour

BUS 140* Taxes for Small Business **2 Credits**
Basic Federal and State laws, regulations and rules governing the preparation of income tax returns for small businesses with major emphasis on single proprietorships and partnerships.
2 Class Hours

BUS 141 Marketing **3 Credits**
The planning and strategy formulation of marketing goods, services, ideas or people, including the principal environmental opportunities and constraints facing the manager of both profit and non-profit organizations. Marketing mix (product, price, place, promotion) and the marketing concept. Lecture, discussion, and cases.
3 Class Hours

BUS 144* Domestic Transportation **2 Credits**
Analysis of practices, theories and policies of the transport network. Study of transportation changes — in the locations and movements of goods and people as well as in the physical and institutional organizations (mergers, conglomerates) and their effect on the entire scope of transportation.
2 Class Hours

BUS 147* Retail Buying/Merchandising **3 Credits**
The principles of what, when, where and how to buy in order to successfully purchase a stock of merchandise that can be resold at a profit. Analysis of merchandising mix, stock turns, and elements of effective display. Promotional aspects including point of sale, impulse and window displays.
3 Class Hours

BUS 149* Principles of Organization and Management **2 Credits**
An introduction to the principles, practices and problems of business organizations. A study of the management process — planning, organizing, staffing, directing and controlling.
2 Class Hours

BUS 150* Personnel Administration **2 Credits**
Techniques and methods to achieve utilization of manpower in business through proper selection, placement, training, job evaluation, wage setting and employee relations.
2 Class Hours

BUS 152 Selling Fundamentals **3 Credits**
Principles of sales with practical application. Steps leading to a successful sale — prospecting, planning and delivering, dramatizing, handling objections, closing, building good will. Development and presentation of a complete procedure for a product or service.
3 Class Hours

BUS 154* Purchasing **3 Credits**
Analytical approach to techniques employed in the industrial purchasing phase of marketing. Emphasis on the organization of the purchasing functions as an operational unit of the firm directed toward procurement activities.
3 Class Hours

BUS 157 Business Report Writing **3 Credits**
Training in logical analysis of business case problems, applied to the preparation of accurate written reports. Methods and skills in formal and informal business writing. Preparation of tables, charts, reference citations and bibliographies. Improvement of basic business writing skill involved in inter-office memos, letters of adjustment, bids, quotations, public relations.
3 Class Hours

BUS 160 Principles of Real Estate **3 Credits**
Economic and social impact of real estate. Emphasis on the real estate cycle dealing with the essentials of real property, finance and legal aspects.
3 Class Hours

BUS 162 Real Estate Investments **3 Credits**
Approach and basic methodology for analyzing a real estate investment. Emphasis is focused on liquidity, maximum current income, future income, protection from inflation, tax shelter, capital gains and principal protection.
3 Class Hours

BUS 165 Insurance **3 Credits**
Insurance principles and coverage, types of carriers, organizations, history of insurance, analysis of types of coverage available for business and individuals in the casualty and life fields.
3 Class Hours

BUS 166 Property and Casualty Insurance **3 Credits**
Common policy provisions relating to property and casualty insurance and surety. Topics include automobile liability and physical damage, workmen's compensation, general liability, New York Insurance Law, rating and multi-line coverage.
3 Class Hours

*TAUGHT EVENINGS ONLY

BUS 170* Insurance for Agents and Brokers 8 Credits

Comprehensive survey of insurance. Fire, marine, automobile, owner liability, burglary, boiler, machinery, accident and health, fidelity and surety insurance. Insurance law and duties of the agent.

8 Class Hours

BUS 200 Intermediate Accounting I 4 Credits

An intensive study of accounting theory and procedures. Emphasis on balance sheet accounts and their interrelationships with income statement accounts. The accounting process and correction of errors. Advanced treatment of cash, receivables, inventories.

4 Class Hours
Prerequisite: BUS 101 Accounting II

BUS 201 Intermediate Accounting II 4 Credits

A more advanced treatment of accounting for fixed assets, intangible assets, current and long-term liabilities. Corporation accounting, funds flow reporting, financial statement analysis.

4 Class Hours
Prerequisite: BUS 200 Intermediate Accounting I

BUS 205 Cost Accounting I 4 Credits

Nature and purpose of cost accounting. Job order and process costing. Accounting for factory overhead and analysis of variances. Accounting for labor and material.

4 Class Hours
Prerequisite: BUS 101 Accounting II

BUS 206 Cost Accounting II 4 Credits

Further consideration of cost accounting principles, standard costs and variances. The construction of budgets, profit planning. Flexible budgets. Direct costing. Break even analysis. Accounting for by-products and joint products. Non-manufacturing costs.

4 Class Hours
Prerequisite: BUS 205 Cost Accounting I

BUS 207* Managerial Accounting I 2 Credits

Use of accounting information by management in decision making. Accounting procedures for the evaluation of performance and responsibility accounting in business and industry.

2 Class Hours

BUS 208* Managerial Accounting II 2 Credits

Relationship of accounting information to such areas of managerial responsibilities as planning and control, cash budgeting and cash flow, relevant cost analysis, profit planning and the effects of price level changes.

2 Class Hours
Prerequisite: BUS 207 Managerial Accounting I

BUS 220 Financial Information Systems 3 Credits

Development of practicable accounting systems to provide the information required for effective managerial control. Techniques of flow charting, developing written procedures, analysis of organization structures, form design applied to the basic area of business.

2 Class Hours, 2 Laboratory Hours
Prerequisite: BUS 101 Accounting II and CST 110 Introduction to Data Processing

BUS 221* Mathematics for Business Analysis 2 Credits

Basic quantitative mathematical methods for management. Techniques and their application to business problems. Foundation for further study of advanced principles of quantitative analysis.

2 Class Hours
Prerequisite: BUS 112 Business Mathematics

BUS 224 Business Finance 3 Credits

Financial principles and procedures. Detailed analysis of forms of business organizations. Single proprietorship, partnerships and corporations together with all financial instruments, surplus, reserves and equities. Application of ratios, rules for budgeting, capitalization, insurance, reorganization.

3 Class Hours

BUS 226* Credit and Collections 3 Credits

Nature and role of credit, credit management, types of credit, credit department organization, credit reports and investigation, collection procedures, investigation and analysis of mercantile and financial institution credit risks, analysis of financial statements. It is suggested that BUS 100 Accounting I be taken prior to this course.

3 Class Hours

BUS 229 Advertising 4 Credits

Development, economies, functions of advertising. Cost application, media, testing and research methods. Development of advertisements, copy and layout, methods and problems of reproduction. Planning the advertising campaign with step by step developments. Lectures, discussions, demonstrations. BUS 141 Marketing is recommended as preparation for this course.

4 Class Hours

BUS 238* Marketing Research 3 Credits

Methods of collecting and interpreting marketing information which affect marketing management. Specific applications to problem identification in market development, gauging market potential and implementation of research designs in the market place. It is suggested that BUS 115 Business Statistics be taken prior to this course.

3 Class Hours

BUS 242 Marketing Seminar 3 Credits

Senior capstone course which integrates various business subjects previously studied. Individual and team approach to analysis of comprehensive marketing and management cases and cooperative consideration of alternative decisions to problem solving.

3 Class Hours
Prerequisite: Permission of Chairperson of Marketing Management Department for non-marketing majors

BUS 243* Industrial Management 2 Credits

Fundamentals of organization and management of industrial concerns. Emphasis upon leadership, human behavior, analysis in decision making. Examination of problem solving in industrial enterprises and applying management principles.

2 Class Hours

BUS 245 Management: A Behavioral Approach 3 Credits

A comprehensive analysis of managerial theories and an integration of selected social sciences to investigate organizational problems related to managerial functions. Communications, decision-making, control theory. Impact of the organizational environment upon human behavior.

3 Class Hours

*TAUGHT EVENINGS ONLY

BUS 246* Principles of Management **3 Credits**

Principles of managerial practices. Planning, organizing, directing, and controlling. Exposes students to proper methods and techniques to achieve employee and job satisfaction. Topics covered include scientific management, behavioral theory, and introduction to management science.
3 Class Hours

BUS 247* Sales Management **3 Credits**

Development of control techniques in the administration of sales forces. Incentive systems, territory planning, development of sales potentials, personnel problems peculiar to this field.
3 Class Hours

BUS 249 Personnel Management **3 Credits**

Principles of managerial practices. The four functions of management — planning, organizing, directing and controlling. Designed to expose the student to the proper methods and techniques to achieve employee and job satisfaction. Processing, developing, maintaining and proper utilizing of the labor force. A review of the history and impact of organized labor incorporating economic, political and social pressures which influence employment.
Effective interview poise, personal appearance, interviewing techniques, job opportunities and placement services. Correct preparation of a resume and the utilization of references.
3 Class Hours

BUS 252* Supervision of Personnel **2 Credits**

Concepts and psychology of personnel supervision. Emphasis on the application of management theory through use of case studies and classroom discussions.
2 Class Hours

BUS 255* Industrial Labor Relations **2 Credits**

Processes of bargaining and contract administration between industrial employers and unions representing employees, as a system of compromising opposing objectives and settling differences. Origins of unions, how they organize and gain recognition and how the labor agreement is negotiated and administered. Interaction among employees, stewards and supervisors. Labor laws. Institutions such as the National Labor Relations Board, mediation services, arbitration boards and courts.
2 Class Hours

BUS 256 Labor Relations for Business and Industry **3 Credits**

Analysis of labor relations and collective bargaining procedures. Policies of organized labor, employers and government in solving labor-management disputes. Grievance procedure, wage and price policies, arbitration, mediation, negotiations and labor contracts.
3 Class Hours

BUS 257* Organizational Behavior **3 Credits**

Processes affecting the behavior of individuals and groups are examined with particular attention to their managerial implications. Relevant concepts and research evidence help students to analyze their experiences and generalize from them. Similarities and differences among effective organizational structures and managerial strategies in the public, private and non-profit sectors.
3 Class Hours

BUS 258* Human Relations in Business **2 Credits**

Basic psychological principles applied to the problems of employee selection, training, evaluation, merit rating and advancement. Social interaction and human relations in industry. Motivation concepts and techniques, job satisfaction, morale, conference leadership and employee and management development.
2 Class Hours

BUS 260* Management of Physical Distribution — Transportation **2 Credits**

Rates, documentation and career liability (legal implications), factors in routing transportation in the milieu of physical distribution and current issues in the field.
2 Class Hours
Prerequisite: BUS 144 Domestic Transportation

BUS 261* Office Management **2 Credits**

A comprehensive study of modern management principles and practices in office organization, operation and control. Office layout, personnel, office equipment, processing of information and the planning, flow and measurement of work within the office.
2 Class Hours

BUS 262 Small Business Management **3 Credits**

Designed for those interested in small business as owner-managers. Development of sound management and modern techniques covering organization, marketing, financing, insurance risk, legal implications, regulations, taxes.
3 Class Hours

BUS 264 Retailing **3 Credits**

Fundamentals of purchasing, merchandising, pricing, promotion. Principles of retail management. Coordination of accounting and basic marketing concepts at the market focal point.
3 Class Hours

BUS 270 Decision Making **3 Credits**

An introduction to managerial problems relating to the planning and controlling functions, which provide guidelines to making rational decisions. A realistic approach utilizing cases and simulation will be taken to expose the student to quantitative as well as subjective analysis to point out the constraints placed upon management.
3 Class Hours
Prerequisite: BUS 115 Business Statistics

BUS 295 Accounting Seminar **3 Credits**

In-depth treatment of accounting for income taxes and payroll taxes. Concepts of conservatism, realization, going concern, current vs. historical costs. Current trends in accounting for leases, research and development costs, inventory pricing and depreciation disclosures.
2 Class Hours, 2 Laboratory Hours

BUS 297 Co-operative Work Experience **1–3 Credits**

Cooperative education is available to students in the marketing management, marketing sales and accounting curriculums. On-the-job experience may be obtained in such areas as retailing, banking, fast foods, government services and hotel management, as well as in CPA firms, public accounting offices, industrial, business and government offices where accounting is performed. To be eligible for these opportunities a student must maintain an over-all cumulative grade-point average of 2.5, with a 3.00 average in business courses, and have no NC's.
Co-operative work students will meet with the coordinator one hour each week.

*TAUGHT EVENINGS ONLY

BUS 299 Independent Study **1-4 Credits**

The student, under the guidance of a faculty member, undertakes an investigation, study and research in an advanced concept or problem concerning his/her major field of study. Only one independent study course is allowed per semester.
Prerequisite: Approval of Faculty Member and Department Chairperson

BUS 360* Establishing a Small Business **1 Credit**

Designed for those who wish to establish their own business as owner-managers. Development of sound management and modern techniques covering talents needed for success. How to select the type of business to enter, to acquire a franchise, and to choose the location.
3 Class Hours (5 weeks)

BUS 361* Operating a Small Business **1 Credit**

Designed for those who wish to operate their own business or who are presently operating their own business. Development of sound management and modern techniques covering the production of a product or service, marketing of the business, supplier relations, techniques of management, and the safeguarding of the firm's assets.
3 Class Hours (5 weeks)

BUS 362* Record Keeping in a Small Business **1 Credit**

Designed for those interested in small business as owner-managers. An in-depth treatment of fundamentals of the accounting process, evaluating the financial health of the business, regulations and taxes affecting the small business and using the computer in operating the small business.
3 Class Hours (5 weeks)

ANTHROPOLOGY

ANT 110 Physical Anthropology and Archeology **3-4 Credits**

Introduction to human evolutionary history and present day variation examining genetics, ecology, fossils and the primate order. Relationships of physical evolution to early cultural developments as revealed by the archeological record. A limited number of students may select an optional laboratory session giving practice in various technical procedures used in physical anthropology and archeology.
3 Class Hours

ANT 111 Cultural Anthropology **3 Credits**

Comparison of various Western and non-Western societies and cultures. Anthropological theory, linguistics, problems of modernization of traditional societies.
3 Class Hours

ANT 299 Independent Study **1-3 Credits**

An individual student project in anthropology which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.
Prerequisite: 3 semester hours in Anthropology

ART

ART 101 Fine Arts: Introduction to Art **3 Credits**

Basic art principles and concepts together with their historical development as shown in representative works of painting, sculpture and architecture. Gallery visits.
3 Class Hours

ART 110, 111 Studio Art **3, 3 Credits**

Basic drawing skills as a foundation for studio work, including black and white media and color, using a variety of media, and ultimately leading into oils, acrylics and water color painting. Composition, color, sketching from life and nature, emphasizing a creative approach to subject matter.
6 Studio Hours each
Prerequisite: Art 110 Studio Art for ART 111

ART 120 Sculpture Fundamentals **3 Credits**

Abstract elements of sculptural form as revealed through analysis of student work and historical examples. Emphasis on developing the student's ability to utilize concepts in practice and to expand his/her understanding of the general function of form as symbolic structure.
6 Studio Hours

ART 130 Ceramics **3 Credits**

Study of the basic processes of the design and creation of ceramics, both functional and sculptural. Fundamentals of hand-building, potter's wheel, glazing and firing.
6 Studio Hours

ART 220 Life Sculpture **3 Credits**

The principles of abstract form applied to the human body, and the expressive possibilities of the human figure explored. Studies of actual models in oil-base clay later to be cast into plaster or carved in wood or stone.
6 Studio Hours

Independent Study: Art **1-3 Credits**
ART 297 Sculpture
ART 298 Painting
ART 299 Art History

An individual student project concerned with advanced work in a specific area of art. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in Art.

AUTOMOTIVE SERVICE SPECIALIST

These courses are all designed to provide theory-related instruction to supplement apprenticeship training on the job.

CAR 151 Auto Electrical Systems **3 Credits**

Basic electrical systems found in automotive equipment: lighting and ignition systems, schematic troubleshooting, power assist systems, wiring harnesses.
3 Class Hours

CAR 152 Integrated Automotive Systems **3 Credits**

Introductory course for automotive apprentices. Theory for foundation in the field of Automotive Technology.
3 Class Hours

*TAUGHT EVENINGS ONLY

CAR 153 Advanced Engine Diagnosis 3 Credits

Continuation of CAR 152 Integrated Automotive Systems, with special emphasis on advanced diagnostic testing and repair procedures. Application of the chassis dynamometer, HC/CO testers and oscilloscopes.
3 Class Hours

CAR 154 Brake Systems and Chassis Repair 3 Credits

Related trade theory of servicing brake systems, window regulators, seat mechanisms, exhaust systems and other chassis accessories. Delivery and road test procedures.
3 Class Hours

CAR 155 Steering and Suspension Systems 3 Credits

Steering systems (both power and manual), suspension systems, wheel alignment. Suspension, front end, steering repair and alignment.
3 Class Hours

CAR 156 Transmission and Drive Systems 3 Credits

Automatic transmissions, clutches, standard transmissions, overdrives, propeller shafts, drive axles. Theory of operation, diagnosis, maintenance and repair.
3 Class Hours

CAR 157 Power Plant Overhaul Theory 3 Credits

Theoretical procedures necessary to rebuild an automotive engine. Disassembly and assembly techniques along with the restoring of tolerances by the machining of engine components.
3 Class Hours

CAR 158 Heating and Air-Conditioning Theory 3 Credits

Automotive heating and air-conditioning systems emphasizing the basic air conditioning cycle.
3 Class Hours

CAR 159 Automotive Parts Department Management 3 Credits

In-depth study of parts numbering, storage, cataloging, retrieval, ordering, stocking, management techniques.
3 Class Hours

CAR 160 Automotive Service Department Management 3 Credits

Marketing techniques, financial analysis, personnel management, work scheduling and distribution, use of pricing manuals.
3 Class Hours

BIOLOGY

BIO 111 General Biology I 4 Credits

Principles of evolution and ecology as unifying themes in biology. Evolutionary processes and ecological adaptations illustrated by plant and animal diversity. The community of cellular life processes. Current environmental problems. The laboratory includes field trips, during which about 40 plant species are observed.
3 Class Hours, 3 Laboratory Hours

BIO 112 General Biology II 4 Credits

Principles of evolution and ecology as unifying themes in biology. The human animal and its systems. Concepts of animal behavior. Classical genetics, current concepts of gene function and human genetics. Organismal growth and development. Current environmental problems. The laboratory includes field trips, during which about 40 local bird species are observed.
3 Class Hours, 3 Laboratory Hours

BIO 131 Human Biology I 4 Credits

Normal structure (gross and microscopic) and function of the skeletal, muscular and nervous systems. Emphasis on physiology in lectures and on anatomy in laboratory, stressing those aspects which have greatest relevance to the student's curriculum.
3 Class Hours, 2 Laboratory Hours

BIO 132 Human Biology II 4 Credits

A continuation of BIO 131 Human Biology I covering the circulatory, respiratory, digestive, urinary, reproductive and endocrine systems. Emphasis on physiology in lectures and on anatomy in laboratory, stressing those aspects which have greatest relevance to the student's curriculum.
3 Class Hours, 2 Laboratory Hours
Prerequisite: BIO 131 Human Biology I or permission of Instructor

BIO 140 Pathophysiology 2 Credits

Symptoms, syndrome and etiology of pathogenic processes affecting the function and structure of the body.
2 Class Hours
Prerequisite: BIO 132 Human Biology II

BIO 150 Microbiology I 4 Credits

The biology of the common bacteria and related microorganisms. General microbiology including asepsis, disinfection, sterilization, cultivation, pathogenicity, resistance, identification.
3 Class Hours, 3 Laboratory Hours

BIO 160 Microbiology 3 Credits

Position of microorganisms in the biological world, as well as their cultivation and identification. Asepsis, disinfection and sterilization. Disease transmission and the human elements in defense. For Medical Office Assistant and Dental Hygiene students.
2 Class Hours, 3 Laboratory Hours

BIO 295 Biology Seminar — Current Trends in Biology 1 Credit

Current trends and developments in the biological sciences presented and discussed by students. Each student is expected to present at least one oral report per semester and to take part in the discussions of other reports. Use of recent literature is stressed. Seminar may be taken each semester for a maximum of 2 credits.
1 Class Hour
Prerequisite: A college general biology course or permission of Instructor

CHEMISTRY AND CHEMICAL TECHNOLOGY

CHM 102 Preparatory Chemistry 4 Credits

Introductory course in chemistry emphasizing problem-solving techniques related to chemical concepts. Atomic structure, stoichiometry, metric units, chemical bonding, chemical nomenclature, solution chemistry.

4 Class Hours

CHM 125* Chemistry 3 Credits

Fundamental concepts of inorganic chemistry. Composition of substances, kinetic and molecular theories, atomic structure and bonding, solutions and colloids, ions in solution and introduction to organic chemistry. For Fire Protection Technology students.

2 Class Hours, 3 Laboratory Hours

CHM 131 Chemistry 4 Credits

Fundamental concepts of inorganic chemistry. Stoichiometry, atomic structure, periodicity, chemical bonding, kinetic theory, states of matter, acids and chemical equilibria. For Medical Laboratory Technology students.

3 Class Hours, 3 Laboratory Hours

CHM 132 Chemistry 4 Credits

A continuation of CHM 131 Chemistry including chemical equilibria, coordination chemistry and an extensive treatment of classical quantitative analysis. For Medical Laboratory Technology students.

3 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 131 Chemistry

CHM 141 General Chemistry 4 Credits

Chemical principles, applications and laboratory experimentation to evaluate important scientific and technological issues in our complex society. Energy sources: coal, gas, petroleum, solar, geothermal, food. Radioactivity, effects of radiation, nuclear weapons and man's effect on the climate. Warming of the earth, the greenhouse effect, atmospheric particles, supersonic transport, weather modifications. For Liberal Arts non-science majors.

3 Class Hours, 3 Laboratory Hours

CHM 142 General Chemistry 4 Credits

A continuation of CHM 141 General Chemistry. Chemistry of the air, water, and land environment. Chemicals in the internal environment: food and drugs. Basic concepts of organic chemistry, polymers and plastics, natural and synthetic organic medicinal compounds, legislation of food additives, regulation of carcinogens, chemistry of living systems, chemistry in criminal investigations. For Liberal Arts non-science majors.

3 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 141 General Chemistry

CHM 145 Chemistry 4 Credits

A comprehensive treatment of general chemistry for the science-oriented student emphasizing the quantitative relationships in chemical reactions and the current atomic and bonding theories explaining chemical phenomena. Periodicity, writing, balancing and interpretation of chemical equations, stoichiometric calculations based on equations, solution stoichiometry. Laws governing physical states and changes in state, physical properties of solutions. For Engineering Science and Liberal Arts science majors.

3 Class Hours, 3 Laboratory Hours
Prerequisite: High School Chemistry or CHM 102 Preparatory Chemistry

CHM 146 Chemistry 4 Credits

Continuation of CHM 145 Chemistry including chemical thermodynamics, kinetics, acid-base theory, chemical equilibrium, equilibria in aqueous solution and electrochemistry. For Engineering Science and Liberal Arts science majors.

3 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 145 Chemistry

CHM 149 Forensic Science 4 Credits

Introduction to forensic chemistry, including the examination of firearms, cartridges, explosives, drugs and other common types of evidence. Emphasis on understanding the chemical properties of substances found in crime scene investigation and subsequent laboratory analysis. Photography, chemical microscopy, chemical instrumentation along with classical experiments in the laboratory.

3 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 102 Preparatory Chemistry or CHM 141 General Chemistry

CHM 161 Chemistry 4 Credits

Basic concepts underlying chemical action emphasizing measurement, basic chemical calculations, atomic structure and the periodic law. Chemical bonding, states of matter, solutions, kinetic and molecular theories, chemical equilibrium and energy changes in chemical reactions. Laboratory stresses techniques in chemical manipulations and data collection. For Chemical Technology students.

3 Class Hours, 3 Laboratory Hours
Prerequisite: High School Chemistry or CHM 102 Preparatory Chemistry

CHM 162 Chemistry 4 Credits

A continuation of CHM 161 Chemistry. Oxidation-reduction and electrochemistry, acids, bases and salts. Solubility product principle and coordination compounds. Laboratory work stresses qualitative and quantitative methods and techniques. For Chemical Technology students.

3 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 161 Chemistry

CHM 190 Forensic Police Chemistry 3 Credits

Introduction to general chemistry. The physical and chemical properties of substances commonly found at crime scenes. Application of chemical principles to the examination and identification of material evidence. Laboratory analysis of these substances. Emphasis of techniques used in the laboratory and proper handling of materials prior to analysis. Introductory period involving classical laboratory techniques, then experiments using modern instrumentation such as gas chromatography and infrared spectroscopy.

2 Class Hours, 2 Laboratory Hours

CHM 221 Organic Chemistry 3 Credits

Nomenclature, properties of selected functional groups, mechanisms, stereochemistry, synthetic methods and spectroscopy. The laboratory covers techniques of separation and purification including gas chromatography, spectroscopy and synthesis. For Medical Laboratory Technology students.

2 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 132 Chemistry

CHM 222 Organic Chemistry 3 Credits

A continuation of CHM 221 Organic Chemistry including a study of the structure, reactivity and stereochemistry of important biomolecules. Laboratory includes multistep synthesis as well as selected experiments with biomolecules.

2 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 221 Organic Chemistry

*TAUGHT EVENINGS ONLY

CHM 224 Instrumental Analysis 4 Credits

Theory and laboratory instruction in electrochemical and optical methods of analytical chemistry, including potentiometry, polarography, amperometry, coulometry, conductimetry, radiochemistry. Ultraviolet-visible, infrared, atomic absorption and emission spectroscopy. Column, thin-layer and gas chromatography. For Medical Laboratory Technology students.
2 Class Hours, 6 Laboratory Hours
Prerequisite: CHM 132 Chemistry

CHM 245 Organic Chemistry 5 Credits

A fundamental treatment of organic chemistry. Nomenclature, properties of selected functional groups, mechanisms, stereochemistry, synthetic methods and spectroscopy. The laboratory stresses basic techniques of reactions, separation, purification and isolation by classical methods as well as modern instrumental techniques. For Liberal Arts science majors and Engineering Science students with departmental approval.
3 Class Hours, 4 Laboratory Hours
Prerequisite: CHM 146 Chemistry or CHM 162 Chemistry

CHM 246 Organic Chemistry 5 Credits

A continuation of CHM 245. Also includes such biomolecules as fats, carbohydrates, proteins and nucleic acids. The laboratory emphasizes multistep syntheses and qualitative organic analysis.
3 Class Hours, 4 Laboratory Hours
Prerequisite: CHM 245 Organic Chemistry

CHM 261 Organic Chemistry 5 Credits

A systematic study of organic chemistry. Nomenclature, structures, reaction mechanisms, chemical properties, syntheses, effects on man and his environment. Laboratory experiments include separations, identifications, syntheses. For Chemical Technology students.
3 Class Hours, 6 Laboratory Hours
Prerequisite: 1 year of college General Chemistry or CHM 162 Chemistry

CHM 262 Organic Chemistry 5 Credits

An extension of CHM 261 Organic Chemistry, a systematic study of organic compounds. Spectroscopy, heterocyclic compounds and polymer chemistry. For Chemical Technology students.
3 Class Hours, 6 Laboratory Hours
Prerequisite: CHM 261 Organic Chemistry

CHM 265 Instrumental Methods of Chemical Analysis 5 Credits

Principles and techniques of modern quantitative analysis including Kjeldahl nitrogen analysis, chelatometry, ion-exchange, non-aqueous titrations, conductimetry, coulometry, electrogravimetry, polarography, amperometry, potentiometry, radioisotope methodology. Statistical evaluation of data obtained by the various analytical methods. For Chemical Technology and Liberal Arts "Chemical Model" students.
3 Class Hours, 6 Laboratory Hours
Prerequisite: 1 full year of college General Chemistry and
MAT 142 Applied Calculus I and PHY 142 Physics

CHM 266 Instrumental Methods of Chemical Analysis 5 Credits

Principles and techniques of modern instrumental methods of chemical analysis including ultraviolet, visible, infrared, nuclear magnetic resonance, atomic absorption, emission and mass spectroscopy. Column, thin-layer, gel permeation, gas and liquid-liquid chromatography. Chemical microscopy and differential thermal analysis. For Chemical Technology and Liberal Arts "Chemical Model" students.
3 Class Hours, 6 Laboratory Hours
Prerequisite: 1 full year of College General Chemistry and
MAT 142 Applied Calculus I and PHY 142 Physics

CHM 271 Chemical Processes 5 Credits

Material and energy balances along with applied chemical and physical principles as they apply to chemical engineering. Emphasis on problem-solving in the classroom and engineering reports in the laboratory.
3 Class Hours, 4 Laboratory Hours
Prerequisite: 1 full year of General Chemistry and
MAT 142 Applied Calculus I and PHY 142 Physics

CHM 272 Chemical Processes 5 Credits

Staged operations dealing with phase equilibrium. Graphical, analytical and computer methods are used to solve unit operations problems. The laboratory emphasizes engineering reports.
3 Class Hours, 4 Laboratory Hours
Prerequisite: CHM 271 Chemical Processes

CHM 290 Forensic Toxicology 3 Credits

Application of the principles of forensic toxicology and the related forensic sciences within the scope of medical-legal investigation. Drug and poison analysis, examination of physical evidence and death investigation. Optional laboratory sessions will provide basic knowledge of forensic analysis utilizing microscopy, gas chromatography, thin layer chromatography and spectroscopy.
2 Class Hours, 2 Laboratory Hours
Prerequisite: CHM 149 Forensic Science or CHM 190 Forensic Police Chemistry
or a semester of General Chemistry or permission of instructor

CHM 291* Organic Chemistry I 3 Credits
CHM 292* Organic Chemistry II 3 Credits

Nomenclature, properties of selected functional groups, mechanisms, stereochemistry, synthetic methods and spectroscopy. The laboratory stresses basic techniques of reactions, separations and isolation by classical methods as well as modern instrumental techniques.
2 Class Hours, 3 Laboratory Hours each
Prerequisites: CHM 146 Chemistry for CHM 291
CHM 291 Organic Chemistry I for CHM 292

CHM 293* Analytical-Instrumental Chemistry I 3 Credits

Classical analytical chemistry — sampling, statistics, gravimetric and volumetric analysis. Introduction to electrochemistry.
2 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 146 Chemistry

CHM 294* Analytical-Instrumental Chemistry II 3 Credits

Continuation of CHM 293 Analytical-Instrumental Chemistry I.
Additional electrochemistry and electrochemical techniques. Emphasis on spectroscopic and chromatographic methods. Visible, infrared and nuclear magnetic resonance spectroscopy. Gas, liquid, column and thin layer chromatography.
2 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 293 Analytical-Instrumental Chemistry I

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*TAUGHT EVENINGS ONLY

CHM 299 Independent Study **2-4 Credits**

The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.
Prerequisite: Departmental approval

CHILD CARE

Child Care (CDC) courses may not be used to satisfy the Social Science requirement.

The Child Care program was developed with great flexibility in course selection and can be taken on a part-time basis by those individuals currently employed in the field. Those students who wish to pursue it on a full-time basis should contact the program Coordinator of Child Care. Very close planning and advisement will be necessary to pursue this program to its completion in two years.

MOST CHILD CARE COURSES (THOSE WITH CDC DESIGNATION) ARE OFFERED ONLY IN THE EVENING. FULL-TIME CHILD CARE STUDENTS MUST PLAN FOR BOTH DAY AND EVENING CLASSES.

CDC 100* Introduction to Education of Young Children 3 Credits

An over-all view of nursery education and where it is going. Discussion of various philosophies and methods, programming, scheduling (what should go into scheduling a day for a pre-schooler and when). Focus on social, emotional and physical needs of young children and the importance of the "self concept" for both the child and the adult working with young children. Introduction to the college's Child Care program covering requirements, courses and career information. A required number of observations in pre-schools, nurseries and day care centers in the area, as well as a special laboratory project. Required of Child Care majors.
2 Class Hours, 2 Laboratory Hours

CDC 115* Music for Young Children 3 Credits

How to develop the whole child through the use of music. This course will be of a practical application for the teacher. Various techniques and methods will be demonstrated through the use of songs, records, eurhythmics, rhythm instruments and creative activities. Class participation will be a vital part of this course. Students will be expected to apply these various methods and activities with young children.
3 Class Hours

CDC 120* Curriculum Development 3 Credits

A pre-school curriculum for students planning to work in day-care centers and nursery schools. Emphasis on how art, language, math, creative play, science and outdoor play programs are used for the physical, social, emotional and mental development of the young child. Sharing and implementing ideas through special projects and construction and implementation of material related to specified areas. Students will be required to perform certain activities in a nursery school setting or with groups of children.
2 Class Hours, 2 Laboratory Hours
Prerequisite: CDC 100 Introduction to Education of Young Children

CDC 140* Art for Young Children 3 Credits

In-depth coverage of art education as it contributes to the pre-school child's emotional, physical and psychological growth. Needs of pre-schoolers in this area and ways to foster creativity and skill acquisition. Materials and methods appropriate for this age. A laboratory experience working with pre-schoolers in art will be required.
2 Class Hours, 2 Laboratory Hours

CDC 150* Motor Development 3 Credits

Designed to give the student an understanding of normal motor development and how it relates to cognitive and perceptual development. Students will be exposed to programs and activities in motor development for young children.
3 Class Hours

CDC 160* Nutrition 3 Credits

Basics of good nutrition with emphasis on children. Ideas on planning and preparing snacks and meals and teaching good nutrition habits to children. Ideas on fitting nutrition into the nursery education curriculum and tying it to other subjects. Projects for practical application and experience in a nursery school setting.
2 Class Hours, 2 Laboratory Hours

CDC 170* Practicum I 3 Credits

Designed to meet the needs of both the experienced and the inexperienced students. The inexperienced student is placed in a classroom setting conducive to the learning of desired teacher competencies, working with an experienced supervising teacher. Six hours per week for twelve weeks in this situation. Self-evaluation as well as being evaluated by others.

The experienced student is given some credit for work experience. For him/her, the practicum emphasizes self-evaluation according to classroom competencies. Both experienced and inexperienced students in group seminars with a college representative and meeting for individual consultations. Required of Child Care majors.
Prerequisite: 30 hours of counseled coursework
Taught evenings, field work days

CDC 180* Child Health and Safety 3 Credits

Designed to help students become aware of techniques for promoting general health care and safety standards at children's centers. Red Cross First Aid and Safety Course included.
3 Class Hours

CDC 200* Social Psychology of Education 3 Credits

An investigation of the social and psychological factors that affect a child's learning processes. How the interaction of the unique characteristics of teachers, community, family and society contribute to the learning environment of the classroom. How learning outcomes can be efficiently achieved. Desirable conditions for learning. Required of Child Care majors.
2 Class Hours, 2 Laboratory Hours
Prerequisite: PSY 110 General Psychology

CDC 210* Special Problems in Children 3 Credits

How to understand and help the child with a special problem. Normal adjustment problems, learning disabilities, physical handicaps, retardation and the emotionally disturbed child. Techniques for the classroom teacher and places to get help. Actual student involvement with children who exhibit these problems.
2 Class Hours, 2 Laboratory Hours
Prerequisite: PSY 211 Child Development

CDC 220* Trends in Education of Young Children 3 Credits

An overview and insight into various philosophies and materials of education for young children, including Montessori, Piaget, open education (comparing English and American schools), affective education, behavior modification. The course aims to develop the competency of the student through practical application.
3 Class Hours
Prerequisite: CDC 100 Introduction to Education of Young Children

***TAUGHT EVENINGS ONLY**

CDC 230* Working with Parents in Nursery Programs 3 Credits

Designed to introduce the need for the parent's involvement in the education of the young child. Benefits for teachers, parents and children, when teachers and parents work closely together. Consideration of feelings of teachers and parents which help or hinder their working together. Various aspects of working with parents, such as home visiting, group parent meetings, newsletters and written communications, parent conferences and the use of volunteers in the classroom. Part of the course on a workshop basis, and students required to develop a special project to earn their third credit.

2 Class Hours, 2 Laboratory Hours
Prerequisite: CDC 100 Introduction to Education of Young Children

CDC 250* Language in Early Childhood 3 Credits

A developmental study of language growth in young children and its influence on learning (cognitive abilities, social and behavioral concepts). Contemporary language theories and programs including a diagnostic approach to teaching language (communication skills, reading readiness and literature appreciation) in the pre-school. The student will be expected to spend a number of hours in a special project requiring observations of individual children and language arts programs.

2 Class Hours, 2 Laboratory Hours
Prerequisite: CDC 100 Introduction to Education of Young Children

CDC 290* Practicum II 6 Credits

Designed to be flexible depending upon the needs and interests of the student. Project for experienced students based on the development of these needs and interests. Project must be approved. The experienced student to share ideas from his/her areas of strength in seminar situations.

For the inexperienced student, a classroom situation to conduct a self-evaluation of own competencies as a teacher, as well as being evaluated by others. Work with an experienced supervising teacher. The inexperienced student to spend 9 hours per week in a classroom situation for 12 weeks. Required of Child Care majors.

Prerequisite: CDC 170 Practicum I and
CDC 200 Social Psychology of Education
Taught evenings, field work days

CDC 299 Independent Study in Child Care 1-2-3 Credits

An individual student project in child care beyond the scope or requirements of the courses offered by the department. Under the direction of a faculty member and approved by the program coordinator and department chairman. No more than 3 credits may be acquired toward the Child Care degree in independent study projects.

1-2-3 Class Hours
Prerequisite: 6 Semester hours in Child Care courses

CIVIL TECHNOLOGY

CIV 111 Surveying I 4 Credits

Plane surveying including distance measurement, note keeping, leveling, angle measurement, care and use of instruments, stadia, record searching, deed descriptions, traversing, coordinates, area computation, map inking and sewer stakeout.

2 Class Hours, 6 Laboratory Hours
Corequisite: MAT 141 College Algebra and Trigonometry

CIV 112 Surveying II 2 Credits

A continuation of CIV 111 Surveying I including mapping, field astronomy, precise leveling, triangulation, electronic measurements and public land surveys.

1 Class Hour, 3 Laboratory Hours
Prerequisite: CIV 111 Surveying I

CIV 115 Engineering Drawing 2 Credits

Fundamentals of Engineering Drawing including care and use of instruments, linework, lettering, dimensioning, orthographic projection, sections, auxiliary views, detailing and an introduction to architectural drawing.

1 Class Hour, 3 Laboratory Hours

CIV 117 Architectural Drafting 2 Credits

Fundamentals of architectural drafting including floor plans, elevations, sections, details, schedules, plot plans, plumbing layouts, electrical layouts. Emphasis on residential drawings.

1 Class Hour, 3 Laboratory Hours
Prerequisite: CIV 115 Engineering Drawing

CIV 124 Mechanics (Statics) 3 Credits

Static force systems and equilibrium. Free body diagrams, trusses, graphic static, spatial force systems, friction, centroids, moments of inertia.

3 Class Hours
Corequisite: PHY 141 Physics

CIV 155* Surveying 3 Credits

Plane surveying including distance measurement, note keeping, compass surveying, leveling, angle measurement, care and use of instruments, stadia, traversing, coordinates, area computation, mapping and records.

2 Class Hours, 3 Laboratory Hours
Prerequisites: MAT 139 Algebra and MAT 140 Trigonometry or MAT 141 College Algebra and Trigonometry

CIV 156* Route Surveying 4 Credits

Horizontal and vertical curves, spirals, sight distances and earthwork. Introduction to computer applications. Laboratory includes problem sessions using the college's computer to solve coordinate geometric problems.

3 Class Hours, 2 Laboratory Hours
Prerequisite: CIV 155 Surveying

CIV 159* Architectural Drafting I 3 Credits

Development of working drawings for use in residential type construction. Plot plans, floor plans, elevations, details, mechanical and electrical layouts. Lectures to include construction materials, specifications and methods.

2 Class Hours, 3 Laboratory Hours

CIV 160* Architectural Drafting II 3 Credits

A continuation of CIV 159 Architectural Drafting I. Development of working drawings for two-story and split-level residences.

2 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 159 Architectural Drafting I

CIV 161* Architectural Drafting III 3 Credits

Development of a set of working drawings for a small two-story commercial building including floor plans, elevations, sections, details, mechanical and electrical layouts, window and door schedules. Term project.

2 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 160 Architectural Drafting II

CIV 163* Plain Concrete 2 Credits

Cements, aggregates and plain concrete, including the testing of cements and aggregates, the design mixing, testing, placing, curing control and inspection of plain concrete. ASTM and AASHO standards.

2 Class Hours

CIV 212 Route Surveying and Photogrammetry 4 Credits

Route Surveying: Simple and compound curves, vertical curves, spirals and earthwork. Selected topics in route selection, field technique and route design. Computer applications (COGO).

Photogrammetry: Basic optics, geometry of aerial photography, flight planning, ground control, stereoscopy and parallax, stereo pairs, mosaics and plotting instruments.

3 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 111 Surveying I

CIV 215 Strength of Materials 4 Credits

Concepts of stress and strain. Simple stress, strain, torsion, shear and moment, stresses in beams, beam deflections, statically indeterminate beams, composite members, columns, combined stresses.

4 Class Hours
Prerequisite: CIV 124 Mechanics (Statics)

CIV 217 Materials Testing 3 Credits

Composition, properties and testing of construction materials. Major emphasis on plain concrete. Aggregates, cements, admixtures, design and proportioning of concrete mixes, curing and inspection. Bituminous materials and ferrous metals, load and deformation measurements, behavior of materials under load, strain gauges.

2 Class Hours, 3 Laboratory Hours
Corequisite: CIV 215 Strength of Materials

CIV 224 Reinforced Concrete Design 3 Credits

Fundamental theory and principles for the design of reinforced concrete. Design, analysis and detailing of rectangular beams. T-beams, beams reinforced for compression, columns and footings. Emphasis on ultimate strength design methods. Theory of prestressed concrete. An integrated design and detailing project.

2 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 215 Strength of Materials

CIV 226 Structural Steel Design 3 Credits

Fundamental theory and principles necessary for design of simple steel structures. Design, investigation and detailing of beams, columns, tension and compression members and their connections. Composite beams. An integrated design and detailing project.

2 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 215 Strength of Materials

CIV 228* Estimating and Construction Planning 3 Credits

A systematic approach to estimating building project costs combined with a study of construction management and the critical path method of scheduling.

2 Class Hours, 2 Laboratory Hours

CIV 231 Estimating and Construction Planning 3 Credits

A systematic approach to estimating building project costs combined with a study of the critical path method of scheduling.

2 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 238 Architectural Design and Building Materials

CIV 235 Hydraulics 4 Credits

Hydraulics including properties of fluids, hydrostatics, fluid motion in or through orifices, nozzles, pipes, weirs, open channels, hydraulic machinery, pipe branches and networks.

3 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 124 Mechanics (Statics)

CIV 236 Construction Management 3 Credits

Principles of construction management, specification writing, with emphasis on planning, building, scheduling and controlling a project.

3 Class Hours
Prerequisite: CIV 238 Architectural Design and Building Materials

CIV 238 Architectural Design and Building Materials 3 Credits

Design and detailing of commercial buildings including site considerations, space requirements, layout planning, building materials, manufacturing processes, construction methods, working drawings. Emphasis on individual creativity. Semester project.

2 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 117 Architectural Drafting I

CIV 240 Soil Mechanics 3 Credits

Soil origin and nature, soil density, test borings, gradation compaction, soil water, frost in soil, classification, stress, retaining walls, shear strength, bearing capacity, piles. The laboratory covers ASTM and AASHO specifications used in classifying and predicting behavior of soils.

2 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 215 Strength of Materials

CIV 244 Environmental Sanitation 3 Credits

Population studies, water supply, transportation, distribution and treatment. Sewage collection and treatment, unit operations. Communicable diseases, biological and chemical aspects of water and sewage. Refuse sanitation, air pollution, industrial wastes, radioactivity.

3 Class Hours
Prerequisite: CIV 235 Hydraulics

CIV 251* Elementary Structural Analysis I 3 Credits

Introduction of structural analysis. Reactions, shear and moment diagrams, truss analysis, graphic statics, influence lines, moving loads, approximate analysis of indeterminate structures, deflections.

3 Class Hours
Prerequisite: MET 235 or CIV 215 Strength of Materials

CIV 252* Elementary Structural Analysis II 3 Credits

Continuation of CIV 251 Elementary Structural Analysis I. Deflections, indeterminate beams and frames, Castigliano's theorems, three moment equations, slope deflections, moment distribution, column analogy and plastic analysis. Computer applications.

3 Class Hours
Prerequisite: CIV 251 Elementary Structural Analysis I

CIV 255* Reinforced Concrete Design 3 Credits

Fundamental behavior of reinforced concrete. Design and analyses of rectangular beams, T-beams, beams reinforced for compression, columns and footings. Major emphasis on ultimate strength design methods.

3 Class Hours
Prerequisite: MET 235 or CIV 215 Strength of Materials

***TAUGHT EVENINGS ONLY**

CIV 257* Structural Steel Design 3 Credits

Fundamental theory and principles necessary for design of simple steel structures. Design and analysis of beams, columns, tension members, compression members and their connections. Composite beams, framing systems, loads and forces.

3 Class Hours

Prerequisite: MET 235 or CIV 215 Strength of Materials

CIV 260* Environmental Sanitation 4 Credits

Communicable diseases, water requirements and waste volumes, water supplies, transportation and distribution of water, chemical and biological aspects. Water treatment, waste water treatment including biological and physical treatments. Emphasis on municipal systems. Individual systems.

4 Class Hours

CIV 262* Soil Mechanics 4 Credits

Origin and nature of soil, soil physics, sampling soil water, flow nets and seepage forces, classification, frost action, stability, retaining walls, piles, and underground conduits.

4 Class Hours

Prerequisite: MET 235 or CIV 215 Strength of Materials or permission of instructor.

CIV 266* Hydraulics 3 Credits

A basic course in theory and practical applications of hydraulics. Properties of fluids, measurements, hydrostatics, dynamic problems of both pipe and open channel flow. Application and limitations of some of the design aids in common use.

3 Class Hours

CIV 268* Engineering Economics 2 Credits

Use of compound interest in financing and in determining engineering cost comparisons. Introduction to depreciation methods. Illustrative cases and problems (personal and engineering) including New York State Professional Engineering Examination problems.

2 Class Hours

Prerequisite: MAT 139 Algebra or equivalent

CIV 270* Highway Design 3 Credits

Phases of highway design in sequence from initiation to final design. Classification of highways, criteria and controls for both horizontal and vertical alignment, typical section, cost estimate, and other features associated with design. A broad review of the scope and content of final plans, specifications and engineers estimate.

3 Class Hours

Prerequisite: CIV 155 Surveying and CIV 156 Route Surveying or permission of instructor

COMPUTER CENTER COURSES

The CST courses are designed to acquaint students with the computer and its capabilities and to provide opportunities for "hands-on" experience.

Because many college programs and industries depend on the computer to process data rapidly, both transfer-minded students and those preparing for immediate employment after graduation are introduced to the capabilities of the computer.

The College has a large computer system capable of supporting both the College's administrative and academic computing concurrently. The batch computing facilities and 30 time-sharing terminals are available to support the academic pursuits of all students.

CST 110 Introduction to Data Processing 3 Credits

Historical development and current influences exerted on our society by the computer. Basic computer concepts including data entry, hardware and software components that comprise a computer system. Introduction to a computer programming language, with emphasis on logical problem definition and documentation using a time sharing system.

3 Class Hours

CST 112 Computer Logic 3 Credits

Comprehensive coverage of basic logic gates, computer arithmetic, Boolean Algebra and Karnaugh Mapping, with a view toward circuit simplification. Adders, subtractors, multiplexers, code converters, a synchronous and synchronous counters presented in detail as basic computer building blocks. Interfacing between analog-digital and digital-analog covered as the method of communicating with the computer. Laboratory exercises utilize TTL and CMOS logic chips to reinforce material presented in lectures.

2 Class Hours, 2 Laboratory Hours

Prerequisite: CST 110 Introduction to Data Processing or instructor's permission

CST 116* RPG 3 Credits

Fundamentals of RPG (Report Program Generator) programming language. Beginning language for small business installations, especially those converting manual or unit record systems to computer. Explanation of specification sheets, internal logic, branching and table look-up operations.

2 Class Hours, 2 Laboratory Hours

Prerequisite: CST 110 Introduction to Data Processing

CST 118 Computer Programming — COBOL 3 Credits

Fundamentals of ANSI COBOL applied to solutions of commercially oriented problems. A number of problems assigned for execution on the computer.

2 Class Hours, 2 Laboratory Hours

Prerequisite: CST 110 Introduction to Data Processing

CST 120 Computer Programming — FORTRAN 3 Credits

Programming solutions to business problems utilizing the FORTRAN IV language. Emphasis on documentation procedures, techniques of programming and error analysis, simulation of business data processing in a laboratory environment. For business students.

2 Class Hours, 2 Laboratory Hours

Prerequisite: CST 110 Introduction to Data Processing

***TAUGHT EVENINGS ONLY**

CST 122 Scientific Computer Programming — FORTRAN 3 Credits

Introduction to problem solving techniques using FORTRAN including development of an algorithm, flow charting, program writing, debugging, storage and execution, input and output, loop techniques, array manipulation, file control and control of on-line equipment, structured programming, terminal and batch operations. Material to be covered taken from student's area of study. For engineering technology students.

2 Class Hours, 2 Laboratory Hours
Prerequisite: Working knowledge of algebra and trigonometry

CST 124 Computer Programming for Engineers 3 Credits

FORTRAN IV programming, block diagramming, numbering and coding systems. Use of graphic plotter, derivation and application of empirical equation analysis, application of matrix algebra, application of simulated time and iteration procedures.

2 Class Hours, 2 Laboratory Hours

CST 126* Assembly Programming — BAL 3 Credits

Fundamentals of assembly level programming using BAL. Emphasis on the use of assembly language in solving a number of programming problems.

2 Class Hours, 2 Laboratory Hours
Prerequisite: CST 110 Introduction to Data Processing

CST 130* PL/1 3 Credits

Introduction to PL/1, a general purpose language capable of conveniently handling both scientific and business problems. Basic program elements, nesting, looping, string techniques, arrays and structures, procedures, input/output and formatting.

2 Class Hours, 2 Laboratory Hours
Prerequisite: One programming language or instructor's permission

CST 200* Systems Analysis 3 Credits

Principles of systems analysis, problem solving and implementation of computer systems including the importance of standards, procedures, security and documentation. Each student to complete a programming project utilizing his/her knowledge from this and other Computer Studies courses. A team case study approach and guest speeches provide the format of work sessions.

2 Class Hours, 2 Laboratory Hours
Prerequisite: One programming language or instructor's permission

CST 205* Advanced FORTRAN with Graphics 3 Credits

A further study of the proper way to write FORTRAN programs. Use of logical structures to define complicated systems, use of subroutines, simulation programming, file structures, queues, searching, sorting. Emphasis on use of school's plotter and graphics terminals. Class project involving graphics, statistics.

2 Class Hours, 2 Laboratory Hours
Prerequisite: CST 120 or CST 122 Computer Programming — FORTRAN or CST 124 Computer Programming for Engineers

CST 217* Advanced RPG II 3 Credits

Multiple content breaks, processing within limits, exception output, arrays, tables and sorts. Special emphasis on sequential, indexed and direct disk file techniques. Laboratory exercises business oriented and run by students in a hands-on environment. Techniques taught are applicable to an actual business environment.

3 Class Hours
Prerequisites: CST 110 Introduction to Data Processing and CST 116 RPG or permission of instructor

CST 220 Introduction to Microprocessors 3 Credits

Digital codes, microprocessor definitions and terms, flow charting, branching, flags, indexing and extended addressing, stack operations, subroutines and system interrupts. Such interfacing concepts as rams, clocks, input and output, buses, tri-states. Extensive use of the 6800 microprocessor.

2 Class Hours, 2 Laboratory Hours
Prerequisites: CST 112 Computer Logic and High Level Programming Language

CRIMINAL JUSTICE

Criminal Justice (CRJ) courses may not be used to satisfy the Social Science requirement.

The Criminal Justice program was developed with great flexibility in course selection and can be taken on a part-time basis by those individuals currently employed in the field. Those students who wish to pursue it on a full-time basis should contact the Program Coordinator of Criminal Justice. Very close planning and advisement will be necessary to pursue this program to its completion in two years.

CRIMINAL JUSTICE COURSES ARE TAUGHT IN THE EVENING ONLY

CRJ 100* Survey of Law Enforcement 3 Credits

History, development and philosophy of law enforcement in a democratic society. Introduction to agencies involved in the administration of criminal justice. Career orientation.

3 Class Hours

CRJ 110* Police Administration 3 Credits

Principles of police management as they relate to organization, functions and activities. Development of policy. Public relations. Professionalism.

3 Class Hours

CRJ 120* Criminal Procedure and Constitutional Law 3 Credits

A review of the steps taken under New York State law to dispose of criminal matters from arrest to appeal, including concepts of probation and parole.

3 Class Hours

CRJ 200* Administration of Justice 3 Credits

An examination of the mechanism under which justice is dispensed under the democratic system. Emphasis on the organization of courts from the federal to the local level.

3 Class Hours

CRJ 210* Penal Law 3 Credits

A detailed study of criminal liability and elements of substantive offenses. Defenses to crime and authorized sentences for crime. Based on the Penal Law of New York State.

3 Class Hours

CRJ 220* Evidence for Law Enforcement 3 Credits

A comprehensive analysis of the rules of evidence as they apply in criminal cases. Emphasis on problems encountered by law-enforcement officers in such areas as illegally obtained evidence and wire-tapping.

3 Class Hours

CRJ 230* Criminal Investigation 3 Credits

Basic principles of criminal investigation as they relate to the collection, preservation, identification and examination of physical evidence. Techniques of locating and interviewing witnesses.

3 Class Hours

Prerequisite: 3 years law enforcement experience or CRJ 210 Penal Law or CRJ 220 Evidence for Law Enforcement

CRJ 240* Introduction to Corrections 3 Credits

Corrections are enshrouded with myths and hampered by public attitudes. Student involvement in the correctional system through discussions, reading, field trips, movies and other experiences. The relationship of law enforcement, corrections, family conditions and correctional treatment methods.

3 Class Hours

Prerequisite: SOC 110 Introduction to Sociology or SOC 111 Social Problems

CRJ 250* Juvenile Delinquency 3 Credits

Causes and treatment of the juvenile delinquent, his apprehension and commitment. Various methods of caring for delinquent, including the present day, psychiatric approach. Problems related to juvenile justice abuses. Case studies, visual aids, guest lecturers and visits to juvenile institutions supplement the lecture and project approach.

3 Class Hours

Prerequisite: SOC 110 Introduction to Sociology or SOC 111 Social Problems

CRJ 260* Introduction to Security 3 Credits

Organization and management of the security function in industry, business, government and institutions. The protection of personnel, facilities and other assets, as well as administrative, legal and technical problems of loss prevention and control.

3 Class Hours

DENTAL HYGIENE

DEN 101 Dental Hygiene I 4 Credits

Contemporary practice of dental hygiene and factors affecting such practice. Principles of instrumentation, root planing, polishing in pre-clinical environment. Clinical experience in some of the basic techniques of dental hygiene care, such as oral prophylaxis, care of equipment and dental first aid.

2 Class Hours, 6 Laboratory Hours

DEN 102 Dental Hygiene II 4 Credits

Continuation of DEN 101 Dental Hygiene I. Clinical experience in the theory, techniques, procedures of dental hygiene care.

2 Class Hours, 8 Laboratory Hours

Prerequisites: DEN 101 Dental Hygiene I and BIO 131 Human Biology I and DEN 103 Oral Anatomy and Physiology

DEN 103 Oral Anatomy and Physiology 4 Credits

Normal structure and function of the oral cavity (microscopic and gross). Laboratory work provides experience with traditional approaches to oral anatomy and physiology.

2 Class Hours, 4 Laboratory Hours

DEN 105 Nutrition 3 Credits

Nutrients necessary for healthy functioning of human beings in various stages of the life cycle — functions, sources, conditions resulting from excessive and inadequate intake of each nutrient. Composition of foods from various plant and animal sources and their use in planning an adequate and balanced diet.

3 Class Hours

Prerequisite: DEN 103 Oral Anatomy and Physiology

DEN 106 Clinical Dental Radiography 2 Credits

Nature and behavior of radiation, biological benefits and hazards, maintenance of radiation hygiene, use and care of the X-ray machine. Intraoral and extraoral dental radiographic techniques performed on manikins and patients, film processing and mounting, radiographic interpretation.

1 Class Hour, 2 Laboratory Hours

Prerequisites: DEN 101 Dental Hygiene I and DEN 103 Oral Anatomy and Physiology and BIO 131 Human Biology I and Geometry or Geometry module

DEN 201 Dental Hygiene III 7 Credits

Continuation of DEN 102 Dental Hygiene II. Integration of theory with clinical experience in various oral hygiene preventive procedures, selected expanded duties and essential business aspects of a dental office.

4 Class Hours, 12 Laboratory Hours

Prerequisites: DEN 102 Dental Hygiene II, DEN 104 Nutrition, DEN 106 Clinical Dental Radiography, BIO 160 Microbiology

DEN 202 Dental Hygiene IV 6 Credits

Continuation of DEN 201 Dental Hygiene III. Clinical experience in all phases of dental hygiene care. Emphasis on planning and execution of the total treatment plan concept.

2 Class Hours, 12 Laboratory Hours

Prerequisites: DEN 201 Dental Hygiene III, DEN 204 General and Oral Pathology and DEN 205 Periodontology

DEN 204 General and Oral Pathology 3 Credits

Broad picture of the disease process through the study of common general diseases, their causes, results and treatment. Emphasis on the principles of inflammation, healing and repair, oral diseases, their causes, recognition and treatment.

2 Class Hours

Prerequisites: DEN 102 Dental Hygiene II, DEN 104 Nutrition, BIO 160 Microbiology and BIO 132 Human Biology II

DEN 205 Periodontology 2 Credits

Pathology of the periodontium. Emphasis on recognition and treatment of the periodontal patient within the scope of the dental hygienist.

2 Class Hours

Prerequisites: DEN 102 Dental Hygiene II, DEN 103 Oral Anatomy and Physiology, DEN 106 Clinical Dental Radiography, BIO 132 Human Biology II and BIO 160 Microbiology

DEN 206 Dental Pharmacology 2 Credits

Pharmacology as it affects the clinical practice of dental hygiene and dentistry. Drugs commonly used in dentistry and correct methods for their use. Emphasis on pharmacological aspects of anesthesia.

2 Class Hours

Prerequisites: BIO 132 Human Biology II and BIO 160 Microbiology

*TAUGHT EVENINGS ONLY

DEN 210 Dental Materials 3 Credits

Composition, chemical and physical properties and use of materials used in the dental laboratory and operatory. Laboratory sessions will provide experience in performing common dental laboratory procedures and background for clinical application of expanded functions.

2 Class Hours, 2 Laboratory Hours
Prerequisite: DEN 201 Dental Hygiene III

DEN 213 Public Health 3 Credits

Principal responsibilities and functions of public health. Tools for measuring a population's needs and demands and how they are met. Community public and dental health agencies and programs. Research relating to dental diseases. Roles and opportunities for dental hygiene in public health. A special project, on-campus or off, must be completed.

3 Class Hours

DEN 214 Dental Specialties 2 Credits

Integration, comparison and study of all the special fields of dentistry including endodontics, periodontics, oral surgery, public health, prostodontics, pedodontics and orthodontics.

2 Class Hours
Prerequisite: DEN 201 Dental Hygiene III

DIETETIC ASSISTANT

DIA 101* Nutrition 3 Credits

The social, cultural, psychological and physiological functions of food. Nutrition care throughout the life cycle. Special consideration given to modifications of the basic diet to meet the needs of the resident in health care facilities. Techniques of interviewing and medical ethics.

2 Class Hours, 4 Directed Practice

DIA 102* Institution Food Preparation 3 Credits

Principles of food preparation, standardization of recipes, menu structure and planning. Serving, merchandising and promotion of food items. Various food preparation equipment and techniques. Sanitary food handling and holding practices emphasized.

2 Class Hours, 4 Directed Practice

DIA 201* Food Management Systems 3 Credits

An introduction to the health field and its inter-relationships. The concept of management including the principles of organizing, evaluation, and the decision making process. Control through specification, purchasing, inventory and cost analysis. Equipment, housekeeping, sanitation and safety practices.

2 Class Hours, 4 Directed Practice

DIA 202* Personnel Management 3 Credits

Leadership and supervisory techniques. Implications of authority and responsibilities. Understanding and communicating with workers and co-workers. Employee recruitment, training and evaluation. Morale and labor relations. Analysis of duties and work simplification performance and motivation.

2 Class Hours, 4 Directed Practice

ECONOMICS

ECO 101 Consumer Economics 3 Credits

Institutions and forces directly affecting the consumer: consumer income and expenditure patterns, personal finance, credit and tax problems. Personal investment alternatives. Impact of the consumer movement on the individual and society.

3 Class Hours

ECO 104 Labor Economics and American Industry 3 Credits

Interaction between business, labor and government. Analysis of the causes of unemployment and income inequality. Connection between productivity, wages, prices and employment and application of anti-trust and labor laws to firms and unions.

3 Class Hours

ECO 107 Health Economics and Law 3 Credits

Economic aspects of health care in America. Demand for medical services, factors which influence its cost, supply and adequate delivery. Alternate ways of solving problems posed. The role of government, social and economic policy in the health care field. Emphasis on the application of micro-economics to health care issues. Medical law as it affects those in medically related fields. Students who have taken ECO 110 Introduction to Micro-Economics must have the permission of the instructor to enroll in this course.

3 Class Hours

ECO 110 Introduction to Micro-Economics 3 Credits

Supply, demand and the market system as they relate to contemporary economic problems including poverty, energy, the environment and urban decay. The allocation of resources under conditions of competition and various degrees of monopoly. Rationale behind anti-trust laws and other governmental attempts to control monopoly power and promote economic well-being. Comparative economic systems.

3 Class Hours

ECO 111 Introduction to Macro-Economics 3 Credits

Causes of unemployment and inflation and the government's efforts to control them. Problems of economic growth as they relate to our economy and to other countries, developed and underdeveloped. International trade and finance problems.

3 Class Hours

ECO 120 American Economic History (Same course as HIS 171) 3 Credits

A topical approach to the economic impetus behind the growth and development of the United States. Colonial heritage and the market system, population and natural resources, agriculture, transportation, labor, business, the capital market and the influence of government. Understanding today's economic problems by observing how they developed historically. Cannot be used to satisfy **both** the history and social science requirement.

3 Class Hours

ECO 130 Political Economy 3 Credits

Historical account of the rise of capitalism and its supporting ideology. An appraisal of the successes and failures of capitalism, of its changing form in Europe and America, and of its future. A critique of capitalism, from the "conservative, liberal and radical" perspectives, which examines the major ideas of Friedman, Keynes, Galbraith and Marx, among others.

3 Class Hours

*TAUGHT EVENINGS ONLY

ECO 140 Economics of Urban Problems **3 Credits**
Application of economic analysis to urban problems, an understanding of the economic forces that affect housing, transportation, poverty, crime, land use, the financing of urban services and the urban future.
3 Class Hours

ECO 253 Money and Banking **3 Credits**
An examination of money, credit and financial institutions, emphasizing how the monetary system influences economic activity. Nature and functions of money, the commercial banking system and other financial institutions, the roles of the Federal Reserve System and the Treasury, monetary policy and international money problems.
3 Class Hours
Prerequisite: ECO 111 Introduction to Macro-Economics

ECO 299 Independent Study **1-3 Credits**
An individual student project in economics which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.
Prerequisite: 3 semester hours in economics

ELECTRICAL TECHNOLOGY

EET 111 Electrical Construction Laboratory I **2 Credits**
Basic knowledge about today's electrical equipment. Experience in the installation, fabrication and maintenance of electrical equipment by means of "hands-on" approach. Shop safety and the National Electrical Code. Basic residential and commercial wiring procedures, basic measuring techniques, fundamentals of basic machine operations.
1 Class Hour, 3 Laboratory Hours

EET 112 Electrical Construction Laboratory II **1 Credit**
Advanced wiring methods, fractional horsepower motor and appliance troubleshooting, introduction to residential and commercial lighting and power layout-design.
3 Laboratory Hours
Prerequisite: EET 111 Electrical Construction Laboratory I

EET 121 Electrical Circuits **5 Credits**
Fundamentals of electrical circuits and application of circuit laws, theorems and measuring techniques to both d-c and a-c single and polyphase circuits.
4 Class Hours, 3 Laboratory Hours

EET 125* Circuits I **3 Credits**
D-c circuits, including loop and nodal analysis, superposition, Thevenin's and Norton's theorems, RL and RC time constants.
2 Class Hours, 2 Laboratory Hours
Prerequisite: MAT 139 Algebra or equivalent
Student may take MAT 139 concurrently with this course

EET 126* Circuits II **3 Credits**
A continuation of the study of circuits concepts related to single and three-phase alternating current. Resonance, network analysis, power.
2 Class Hours, 2 Laboratory Hours
Prerequisite: MAT 140 Trigonometry or equivalent and EET 125 Circuits I
Student may take MAT 140 concurrently with this course

EET 130 Engineering Drawing **1 Credit**
Principles of projection. Development of drafting skills, lettering and proper line construction. Dimensioning and tolerancing, with an emphasis on shop processes. Use of auxiliary views and sectioning. Preparation of assembly drawings, materials lists, schematic and wiring diagrams.
3 Laboratory Hours

EET 150 Electronics I **5 Credits**
Principles of resonance, inductive coupling, transformers, RL and RC time constants, rectification. Characteristics of electronic devices including diodes, bipolar transistors, field effect transistors, tubes, unijunction transistors, thyristors and special purpose devices. Biasing techniques, load line analysis, rule-of-thumb design, hybrid parameters. Computer used to solve problems.
4 Class Hours, 3 Laboratory Hours
Prerequisites: MAT 141 College Algebra and Trigonometry and CST 122 Scientific Computer Programming — FORTRAN and EET 121 Electrical Circuits

EET 162 Computer Aided Network Analysis **3 Credits**
Computer analysis of complex electrical and electronic networks by application of network theorems. Use of a second computer language (Basic) to display the response of two port networks. Use of the computer to apply matrix methods to the analysis of complex circuits and the solution of network problems.
3 Class Hours
Prerequisites: CST 122 Scientific Computer Programming — FORTRAN and EET 121 Electrical Circuits and MAT 141 College Algebra and Trigonometry

EET 185 Electricity **3 Credits**
Practical applications of electrical concepts as applied to basic d-c and a-c circuitry, motors, alternators, energy sources and protection equipment. Laboratory work includes demonstration of concepts by students; operation of common electrical measuring instruments such as multimeters, oscilloscopes, wattmeters and bridges; operation of basic a-c motor starters.
2 Class Hours, 3 Laboratory Hours
Prerequisites: PHY 142 Physics (Electricity and Magnetism) and MAT 141 College Algebra and Trigonometry

EET 186 Electronics **3 Credits**
Practical applications of electronic concepts as applied to solid state devices, amplifiers, power supplies, oscillators, timers, multivibrators and basic logic devices. Laboratory work includes practical applications of concepts by students, operation of common electronic instruments such as oscilloscope, curve tracer, function generator and counter.
2 Class Hours, 3 Laboratory Hours
Prerequisite: EET 185 Electricity

EET 230 Electronic Design and Fabrication **1 Credit**
Selection, package design and construction of an electronic project and preparation of related drawings. Use of various manufacturing processes to fabricate the project. Use of industrial standard drafting practices to properly describe the operations. Chassis layout, printed circuit board design and etch, wiring, soldering, enclosure.
3 Laboratory Hours
Prerequisites: EET 150 Electronics I, EET 130 Engineering Drawing and EET 112 Electrical Construction Laboratory II

*TAUGHT EVENINGS ONLY

EET 241 Electrical Machines and Controls I — 4 Credits

Theory, operation and application of d-c machines, and their magnetic and solid state control. Theory and application of single and polyphase power transformers and rectifiers. Generation and use of three-phase power.

3 Class Hours, 3 Laboratory Hours
Prerequisite: EET 150 Electronics I

EET 242 Electrical Machines and Controls II — 5 Credits

Theory, operation and application of a-c motors and controls. Principles of open and closed loop systems. Theory, operation, application of industrial equipment used in control systems.

4 Class Hours, 3 Laboratory Hours
Prerequisite: EET 241 Electrical Machines and Controls I

EET 245* Electrical Machines — 4 Credits

D-c and a-c machine theory, application and control. Single phase and polyphase transformers, solid state rectification.

3 Class Hours, 2 Laboratory Hours
Prerequisite: EET 126 Circuits II

EET 251 Electronics II — 4 Credits

Basic configurations of active devices, equivalent circuits, performance predictions, frequency response, Bode plots, negative feedback, operational amplifiers, integrated circuits, active filters.

3 Class Hours, 3 Laboratory Hours
Prerequisite: EET 150 Electronics I

EET 252 Electronics III — 4 Credits

Passive and active waveshaping, non-sinusoidal oscillators, sinusoidal oscillators, large signal amplifiers, regulated power supplies, elements of communications systems.

3 Class Hours, 3 Laboratory Hours
Prerequisite: EET 251 Electronics II

EET 255* Electronics I — 4 Credits

Principles of amplification, rectification, filtering and regulation. Characteristics of electronic devices including diodes, bipolar transistors, field effect transistors, operational amplifiers, tubes, unijunction transistors, thyristors and special purpose devices. Biasing techniques, load line analysis and equivalent circuits.

3 Class Hours, 2 Laboratory Hours
Prerequisite: EET 126 Circuits II

EET 256* Electronics II — 4 Credits

Basic configurations of active devices, equivalent circuits, performance predictions, frequency response, Bode plots, negative feedback, operational amplifiers, integrated circuits, active filters.

3 Class Hours, 2 Laboratory Hours
Prerequisite: EET 255 Electronics I

EET 257* Electronics III — 4 Credits

Passive and active waveshaping, non-sinusoidal oscillators, sinusoidal oscillators, large signal amplifiers, regulated power supplies, timers, phase locked loops and elements of communications systems.

3 Class Hours, 2 Laboratory Hours
Prerequisite: EET 256 Electronics II

EET 267 Digital Electronics and Microprocessors — 4 Credits

Construction of the analog computer in the areas of system simulation and problem solution. Use of electronic circuitry to solve mathematical problems. Digital computer hardware and number systems. Building blocks, sub-system and system operations. Construction and use of monolithic integrated circuits including applications and limitations of available families. Appropriate laboratory exercises provide hands-on experience in the application of digital circuits.

3 Class Hours, 2 Laboratory Hours
Prerequisite: EET 150 Electronics I or EET 255 Electronics I

EET 299 Independent Study — 2–4 Credits

The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a job-related assignment. Any independent study project is based on instructor availability.

Prerequisite: Departmental Approval

ENGINEERING

EGR 110 Introduction to Technologies — ½ Credit

Introduction to the college and its policies, placement, transfer and study skills. Reasonable proficiency in the use of the hand calculator is developed. For engineering technology freshmen.

1 Class Hour

EGR 130* Professional Engineers Review Course — 5 Credits

For those qualified who plan to take the New York State Licensing Examination. New requirements for the National Examination. Physics, statics, dynamics, mechanics of materials, electrical theory, economic analysis, mathematics, fluid mechanics, thermodynamics, systems analysis, computer science. Chemical, civil, electrical and mechanical engineering problems. This course can also serve as a guide for self-study for any engineer who wishes to review the broad subject areas in engineering. This is a 30-week course.

2½ Laboratory Hours

EGR 281 Mechanics (Statics) — 3 Credits

Fundamental concepts of the statics of rigid bodies developed by using a vector analysis approach. Force systems, centroids and centers of gravity, analysis of structures, shear and bending moments, friction and moments of inertia.

3 Class Hours
Prerequisite: 1 year of calculus and PHY 181 Physics I

EGR 282 Mechanics (Dynamics) — 3 Credits

Concepts using vector analysis approach to kinematics and kinetics of particles, systems of particles, kinematics and kinetics of rigid bodies. Forces, mass, acceleration impulse, momentum, work and energy techniques.

3 Class Hours
Prerequisite: EGR 281 Mechanics (Statics)

***TAUGHT EVENINGS ONLY**

EGR 285 Electrical and Electronic Circuits — 3 Credits

Units, Coulomb's Law, Ohm's Law, Faraday's Law, Krichhoff's Law, energy and power. Resistance, inductance and capacitance parameters. Series and parallel circuits, superposition theorem, network analysis by mesh currents, nodal techniques. Thevenin's Theorem, network reduction. Techniques for solving step response, pulse response, forced response, natural response and complete response. A-c circuits, phasors, impedances, resonance. Transistor parameters, linear equivalent circuits, biasing methods. Single, double and triple amplifier response in terms of gain, bandpass. Coupling techniques.
3 Class Hours
Prerequisite: 1 year of calculus and 1 year of physics or permission of instructor

EGR 286 Engineering Analysis — 1 Credit

Statistical treatment of experimental data, introduction to microprocessors with digital logic.
1 Class Hour
Prerequisite: 1 year of calculus and a high-level programming language

EGR 287 Engineering Science Laboratory I — 1 Credit

Experimentation in electrical and electronic circuits, heat and sound. Some of the experiments may include independent projects.
3 Laboratory Hours
Prerequisite: 1 year of calculus and 1 year of laboratory physics
Co-requisite: EGR 285 Electrical and Electronic Circuits

EGR 288 Engineering Science Laboratory II — 1 Credit

Experimentation in atomic and nuclear physics, light and microprocessors. Some of the experiments may include independent projects.
3 Laboratory Hours
Prerequisite: EGR 287 Engineering Science Laboratory I
Co-requisite: EGR 286 Engineering Analysis

EGR 299 Independent Project — 2-4 Credits

The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.
Prerequisite: Departmental Approval

ENGLISH

After completing a writing sample, students may be directed by the English Department to enroll in ENG 100 Basic Language Skills, a special writing center course. Students generally begin a composition sequence with ENG 110 Written Expression I.

ENG 100 Basic Language Skills — 3 Credits

Writing workshops designed to improve a student's mastery of composition skill, including patterns of sentence structure and the recognition and correction of common errors in grammar and usage.
Minimum 3 Class Hours

The following courses are specially designed for non-native speakers and are parallel to the usual composition sequence of ENG 110 and ENG 120 (or ENG 150).

ENG 105 English as a Second Language I — 3 Credits

A study of the English language for non-native speakers with some knowledge of English. Language workshops to develop listening, speaking, reading and writing skills at the intermediate level. Emphasis on grammar, syntax, vocabulary.
3 Class Hours

ENG 106 English as a Second Language II — 3 Credits

Advanced study of the English language for non-native speakers. Emphasis on the development of compositional skills. Writing workshops for intensive practice in composition.
3 Class Hours
Prerequisite: ENG 105 English or permission of the Instructor

ENG 110 Written Expression I — 3 Credits

Study and practice in the composition of ideas and information. Sentence and paragraph development, unity, coherence, style. Nature of language, including investigation of various aspects of communication to stimulate critical thinking.
3 Class Hours

ENG 120 Written Expression II — 3 Credits

Further study and practice in critical and evaluative writing based upon analysis of major types of imaginative literature. Familiarization and practice with research procedures.
3 Class Hours
Prerequisite: ENG 110 Written Expression I or permssion of the Instructor

ENG 150 Technical Writing — 3 Credits

Principles and practice of writing to be eventually required of students in technology programs as part of their professional duties. Emphasis on analysis and preparation of reports, articles and technical correspondence.
3 Class Hours
Prerequisite: ENG 100, ENG 106, ENG 110 or permission of Instructor

ENG 160 Expository Writing — 3 Credits

An intensive course in expository, persuasive and critical writing for students who have already mastered the basic skills of written expression. Emphasis on critical reading of professional essayists and articles.
3 Class Hours
Prerequisite: ENG 120 Written Expression II

ENG 165 Creative Writing **4 Credits**

Designed to provide students interested in imaginative writing with the opportunity to investigate concepts and to practice techniques implicit in prose, poetry and drama. Class discussion, workshops and personal conferences with the instructor. The class will evaluate and arrange material for a campus-wide literary magazine.

3 Class Hours, 2 Laboratory Hours

ENG 200 Media and Culture **3 Credits**

A critical examination of the mechanisms and influences of radio, television and film media on the individual and on society. Exposure to culturally important media works and to some of the important commentators on these works. (Liberal Arts students may not use this course to fulfill composition or literature requirements.)

3 Class Hours

ENG 299 Independent Study: English **3 Credits**

An individual student project concerned with advanced work in a specific area of language or literature. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: One semester of college level work

FIRE PROTECTION TECHNOLOGY

FRS 101* Fire Prevention and Protection **3 Credits**

Methods, policies and procedures relative to establishing and operating appropriate fire prevention and protection programs.

3 Class Hours

FRS 103* Fire Fighting Tactics and Strategy **3 Credits**

Focus on pre-planning and the development of fire fighting tactics appropriate for a wide variety of hazards. Review of basic information and some local conditions. The case study method is used to develop plans and tactics relating to the student's own departments.

3 Class Hours

FRS 105* Arson Investigation **3 Credits**

Fire investigations and arson. Responsibilities of the arson investigator, tools of the investigator, photography, electronic devices, laws pertaining to arson, motives and tools of the arsonist, courtroom procedures. A field experience will be included.

3 Class Hours

FRS 108* Building Construction for Fire Science **3 Credits**

Fire fighters are confronted with many unknown factors at the fire ground. Among these is the unknown structural stability of the buildings they must enter. Basic principles of building construction and design with emphasis focused on fire protection concerns. Building materials included.

3 Class Hours

FRS 200* Hazardous Materials **3 Credits**

Chemicals and chemical processes most closely involved in fire protection and fire fighting. Use, storage, transportation and disposal of hazardous materials with emphasis on flammable liquids, flammable solids, oxidizing materials, corrosive liquids, compressed gases.

3 Class Hours
Prerequisite: Chemistry

FRS 201* Fire Service Hydraulics **3 Credits**

Application of the laws of mathematics and physics to properties of fluid states, force pressure and flow velocities. Emphasis in applying principles of hydraulics to fire-fighting problems.

3 Class Hours
Prerequisite: MAT 139 Algebra

FRS 205* Fire Department Administration **3 Credits**

Organization of fire departments with emphasis on personnel management, distribution of equipment, maintenance of records, communications, data collection and community relations. ISO Grading Schedule.

3 Class Hours

FRENCH

FRE 101, 102 Beginning French **4, 4 Credits**

Basic principles of grammar and syntax. Emphasis on oral practice in classroom, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.

4 Class Hours, 1 Laboratory Hour each
Prerequisite: FRE 101 Beginning French for FRE 102

FRE 201 Intermediate French I **3 Credits**

Intensive review of grammar and syntax and oral practice in classroom and audio-lingual laboratory. Reading and discussion of works selected by the instructor.

3 Class Hours, 1 Laboratory Hour
Prerequisite: FRE 102 Beginning French

FRE 202 Intermediate French II **3 Credits**

Reading of literary works of recognized authors. Continuation of grammar, syntax and oral practices in classroom and audio-lingual laboratory.

3 Class Hours, 1 Laboratory Hour
Prerequisite: FRE 201 Intermediate French I

FRE 203 Masterpieces of French Prose and Poetry I **3 Credits**

The Middle Ages through the Age of Reason. Readings, lectures and discussions of representative works. (Not offered in 1979–80 academic year).

3 Class Hours
Prerequisite: FRE 202 Intermediate French II

FRE 204 Masterpieces of French Prose and Poetry II **3 Credits**

The Age of Romanticism to contemporary times. Readings, lectures and discussions of representative works. (Not offered in 1979–80 academic year).

3 Class Hours
Prerequisite: FRE 203 Masterpieces of French Prose and Poetry I

FRE 205 The Art of French Conversation and Composition **3 Credits**

To develop the student's perception and appreciation of spoken and written French to prepare him or her for further study of the French language, literature and culture. (Not offered in 1979–80 academic year).

3 Class Hours
Prerequisite: FRE 201 and FRE 202 Intermediate French or equivalent

FRE 299 Independent Study: French **1-3 Credits**

An individual student project concerned with advanced work in a specific area of French. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in French

GEOGRAPHY

GEO 110 Physical Geography **3 Credits**

Interrelationships of global systems of climate, vegetation, soils, landform development and their significance to humans. The impact of human presence upon natural systems. (Not offered in 1979-80 academic year).
3 Class Hours

GERMAN

GER 101, 102 Beginning German **4,4 Credits**

Basic principles of grammar and syntax. Emphasis on oral practice in classroom. Written homework assignments, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.
4 Class Hours, 1 Laboratory Hour each
Prerequisite: GER 101 Beginning German for GER 102

GER 201 German Conversation and Composition **3 Credits**

Emphasis on the four language skills — reading, writing, speaking, listening — especially on speaking and writing. Intensive discussion of style, grammar and the contemporary idiom to enhance the student's ability to express himself in German. (Not offered in 1979-80 academic year).
3 Class Hours, 1 Laboratory Hour
Prerequisite: GER 102 Beginning German

GER 299 Independent Study: German **1-3 Credits**

An individual student project concerned with advanced work in a specific area of German. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in German

HISTORY

HIS 100 The Rise of the West **3 Credits**

Core course required of all Liberal Arts students and a prerequisite for all other HIS 100 level courses.

Introduction to both the study of history and the evolution of modern society, including its basic ideas, values and institutions, through an examination of Western Civilization. The Age of Transition — the Renaissance, the Reformation, the Scientific Revolution, and the Enlightenment. The Industrial Transformation, appearance of modern constitutional and authoritarian government, major socio-political ideologies — liberalism, socialism, communism, nationalism, imperialism, fascism, totalitarianism. The intellectual crisis of the 20th Century, World Wars I and II.
3 Class Hours

CIVILIZATION SURVEYS
(HIS 100-161)

Liberal Arts students may select any one of the following courses in order to satisfy the remainder of the history requirement.

HIS 110 Classical and Medieval History **3 Credits**

Development of the Western tradition from the dawn of history through the classical civilizations of Greece and Rome, as well as the Middle Ages. Focus on those ideas and institutions from the past which continue to influence modern times.
3 Class Hours

HIS 130 United States History I **3 Credits**

The United States from 1607 to 1898. The colonies, Revolution, Constitution, early national period, Age of Jackson, expansion, Civil War and Reconstruction, the West and the Gilded Age. Survey of political, economic, cultural developments through the 19th Century.
3 Class Hours

HIS 131 United States History II **3 Credits**

The United States from 1898 to the present. The American Empire, progressive reforms, World War I, the Twenties, Depression, New Deal, World War II and the Cold War, post-war domestic issues.
3 Class Hours

HIS 141 Development of Modern Latin America **3 Credits**

History of Latin America from Independence to the present, emphasizing the causes of political instability and economic backwardness. Close analyses of reform, reactionary and revolutionary movements in modern Latin America, and of inter-American affairs. (Formerly History of Latin America II.)
3 Class Hours

HIS 150 Russian and East European History I **3 Credits**

Survey of Slavic history from early settlement in Kievan Russia and Eastern Europe, Mongol and Turkish conquests, rise of Muscovy and House of Hapsburg, reigns of Peter I and Catherine II, fate of Poland, Ottoman Empire in Europe, and other significant topics to the end of the Crimean War.
3 Class Hours

HIS 151 Russian and East European History II **3 Credits**

From the latter half of the 19th Century including the gradual transition to modernity, imperialism of Russia, Austria and the Ottomans, rise of Balkan nationalism, the Dual Monarchy of Austria-Hungary, revolutions, World Wars I and II, Soviet hegemony and contemporary issues.
3 Class Hours

HIS 160 Traditional China and Japan **3 Credits**

Investigation of the origins of Chinese and Japanese civilizations, emphasizing the influences of culture, geography, religion. Contrast with early Western development to establish the "unique mood" of pre-modern Asian society. Chronological coverage of the major historical eras.
3 Class Hours

HIS 161 Modern China and Japan **3 Credits**

Investigation and analysis of the history of modern China and Japan in the 19th and 20th Centuries. Emphasis on events and changes in East Asia since the end of World War II. The increasing importance of China and Japan to the stability of the modern world. Major cultural developments as they serve to illuminate the behavior of modern East Asians.
3 Class Hours

SPECIAL TOPICS IN HISTORY (HIS 170-199)

HIS 170 The Future as History: A Look at the 21st Century United States 3 Credits

Does the future have to be a shock? The objective of this course is to prove it does not have to be. Three or four possible courses which the next 100 years may take will be plotted, using knowledge of the economic, political and social developments of the past 100 years of U.S. history and a basic understanding of the present day situation.
3 Class Hours

HIS 171 American Economic History (Same course as ECO 120) 3 Credits

A topical approach to the economic impetus behind the growth and development of the United States. Colonial heritage and the market system, population and natural resources, agriculture, transportation, labor, business, the capital market and the influence of government. Understanding today's economic problems by observing how they developed historically.
3 Class Hours
Cannot be used to satisfy **both** the history and Social Science requirement.

HIS 175 Local History 3 Credits

The early history of our local area including the late 18th Century Indian communities and the growth of 19th Century white settlements through development of industries and institutions from the days of the frontiersmen to the era of the railroaders and the factory hands. Historical methods of research. An historical walking tour of Binghamton, investigation of historical records on the premises of cooperative local institutions, and observation of contributions to local history. (Formerly HIS 231.)
3 Class Hours

HIS 180 Utopia: The History of Perfect Societies 3 Credits

Examines the relationship between the "real" and the "ideal" in fictional and actual utopian communities. Comparisons of utopian thought from the classical, medieval and modern periods, from the Garden of Eden to the contemporary commune. Writings of Plato, More, Condorcet, Owen, Saint-Simon, Fourier, Marx, Wells, Huxley, Telhard de Chardin, Wagar and others.
3 Class Hours

HIS 183 Woman as a Force in History 3 Credits

Women's contributions to the evolution of Western institutions. Exploration of the origins of myths about women, women's roles in modern society, evolution of modern feminism. (Formerly HIS 227.)
3 Class Hours

HIS 186 Modern American Social History 3 Credits

Historical currents of social change and social reform in the 20th Century from the latter part of the 19th Century to the "Great Society." Reformist themes bearing on health, welfare, civil rights, labor and women's suffrage against the backdrop of hostile and supportive private groups. Creation of public institutions to meet human needs (the U.S. Public Health Service, the Social Security Administration), the response of the courts to organized reformist pressure, and social needs still unmet. For students in health-related and human services career programs.
3 Class Hours

HIS 190 The World Since 1945 3 Credits

An overview of the changing patterns in world affairs since the end of World War 2 in 1945. For example, emergence of the Third World, the Cold War, responses to scientific/technological change, insurgent movements, attempts at world organization/disarmament, the energy/ecology crisis, the various trouble spots like the Middle East, Panama Canal, Berlin.
3 Class Hours

SHORT MODULES
(HIS 200-295)

The department offers special short modules of courses that carry one credit each. These deal with concentrated topics in history and are less than one semester in length. For example, modules have been given in "The Great Man in History" series focusing on Adolf Hitler, Fidel Castro, Charles Darwin and Chairman Mao Tse-tung, each covering a 5-week period.

HIS 200 Series — Great Figures in History 1 Credit

Examining the advantages and disadvantages of using a biographical approach to the study of a particular period in history. In analyzing a "great figure," the student studies the interconnections between the actions of a great person, the role of chance and pressures of major social forces in shaping the course of human history.
3 Class Hours (For 5 weeks)

HIS 299 Independent Study 1-3 Credits

An independent student project which is beyond the scope of courses currently offered by the department, directed by a faculty member with approval of the department chairperson. Independent study does not satisfy the Liberal Arts requirement in history, and it may not be taken in lieu of a 100-series course.
Prerequisite: HIS 100 The Rise of the West

HUMAN DEVELOPMENT COURSES

Across the nation students have been indicating that they want the opportunity in college to identify, pursue and accomplish personal goals, to develop healthier self-concepts, to develop more effective levels of self-understanding and to become open human beings who can build trusting relationships with others. The student affairs courses can be one means of facilitating humanistic objectives espoused by "new" college students.

SAC 101 The Individual in a Changing Environment 3 Credits

Individual interaction and reading designed to foster understanding and application of psychological and emotional growth. Basic class material is the individual and group analysis of student's experience within an immediate unstructured setting. Focus on analysis and organization of experience into a personally rewarding conception of growth. Individual self-development projects outside the class.
3 Class Hours

SAC 295, 296 Seminar in Human Potential 3,2 Credits

Human Potential focuses on the person's own resources, strengths, motivators, values and successful and satisfying experiences. Human potential sessions are positive group experiences working on and with the potential and strengths of the feeling concerning one's self and others by utilizing specific procedures.
3, 2 Class Hours

HUMANITIES

HUM 201 The Concept of Man: Naturalism and Evolutionary Thought 3 Credits

An interdisciplinary course exposing the student to a broad spectrum of materials: drama, film, fiction and the arts, as well as expository anthropological and biological writing dealing with man's rediscovery of his "animality" and its effects on his self-concept. Focusing on the years 1850 to the present, the student reads such authors as Freud, Marx, Darwin, Crane, Dreiser, Zola, Morris, Lorenz and Shockley. Completion of a guided independent research project in an area of the student's interest is required. (Not offered in 1979-80 academic year).
3 Class Hours

INDUSTRIAL SAFETY AND OCCUPATIONAL HYGIENE

SAF 100 OSHA Codes and Regulations 3 Credits

In-depth study of the federal Occupational Safety and Health Act of 1970 (OSHA). Other pertinent laws for the protection of the ambient and occupational environments, how they are put together, what is pertinent and how they are used.
3 Class Hours

SAF 101 Accident Investigation and Prevention 3 Credits

Identification of present and future hazards in facilities, operations and products. Methods of investigation of hazards, reports of injuries, property damage and their causes. Development of accident prevention and loss control methods, procedures and programs.
3 Class Hours

SAF 102 Design and Evaluation of a Safety Program 3 Credits

Development of comprehensive program to protect the employee from potential health hazards in the work environment. Elements of a comprehensive industrial hygiene survey: evaluating existing control mechanisms, review of process or operations, inventory of hazardous materials sources, field study and results, corrective action plan and methods of control.
3 Class Hours

SAF 105 Material Handling and Storage of Special and Common Products 3 Credits

An in-depth study of handling and storage principles and procedures. Personal injuries, improper techniques and hazards of special materials, as well as correct methods and procedures. Visits to industrial sites.
3 Class Hours

SAF 110 Ventilation and Exhaust 3 Credits

Principles of ventilation and ventilation control. Student will visit various industries to study the practical application of systems, engineering problems, methods of control of industrial wastes through the systems.
3 Class Hours

SAF 111 Machine Guarding 3 Credits

Various types of methods and systems in use, advantages and disadvantages of types, design of appropriate machine guarding for work being done. Visits to industrial sites.
3 Class Hours

SAF 120 Introduction to Industrial Hygiene 3 Credits

Fundamentals of industrial hygiene, review of basic mathematics, chemical concepts, associated biochemical concepts, industrial toxicology techniques. Use of guides, codes, regulations and standards for chemical and physical agents. Concepts of a noise program and air sampling.
2 Class Hours, 3 Laboratory Hours
Prerequisite: Chemistry or permission of instructor

SAF 125 Air Sampling and Noise Surveys 3 Credits

Concepts of a noise program, elements of an air monitoring program, types of sampling and surveys for both air and noise, interpretation of results, protective devices.
2 Class Hours, 3 Laboratory Hours

SAF 130 Product Safety 3 Credits

Intended and potential uses of a product, its material and construction. Establishment of general requirements for the application of safety principles throughout planning, design, development, fabrication and test of various products to achieve maximum product safety.
3 Class Hours

SAF 250 Special Topics: Safety 1-3 Credits

An opportunity to explore in depth special topics and problems in Industrial Safety and Health. May be repeated once for credit as the subjects will vary from semester to semester.

INTERIOR DESIGN

INT 101 History of Design 3 Credits

Survey of exterior and interior architectural styles from Ancient Egyptian through 20th Century.
3 Class Hours

INT 110 Interior Design I 4 Credits

Color; projects in residential interior design including color coordination, floor plan, space utilization. Study of currently available resources.
2 Class Hours, 4 Laboratory Hours

INT 111 Interior Design II 4 Credits

Continuation of INT 110 Interior Design I. Projects in window treatments, walls and floors. Lighting problems. Practical experience in methods of measuring, estimating and installation. Materials for windows, walls and floors.
2 Class Hours, 4 Laboratory Hours
Prerequisite: INT 110 Interior Design I

INT 120 Furniture Design I 2 Credits

Design of living room, dining room and kitchen cabinetry.
2 Class Hours

INT 121 Furniture Design II **2 Credits**
Design of seating units, sofas, chairs. Tables and occasional furniture. Practical experience in methods of upholstery and slipcovering. (Not to be given in 1979-80 college year.)
2 Class Hours, 1 Laboratory Hour

INT 130 Rendering **2 Credits**
Perspectives of room interiors: treats the problems of representation related to light, texture and color.
4 Laboratory Hours

INT 140 Fabric Analysis **2 Credits**
Types of fabrics used in interior design including methods of manufacturing, fiber and construction analysis, historical origins.
2 Class Hours

ITALIAN

ITA 101, 102 Beginning Italian **4, 4 Credits**
Basic principles of grammar and syntax. Emphasis on oral practice in classroom, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.
4 Class Hours, 1 Laboratory Hour each
Prerequisite: ITA 101 Beginning Italian for ITA 102

ITA 201 Intermediate Italian I **3 Credits**
Comprehensive review of grammar and structure of the language. Intensive reading of literary works as a basis for topics of conversation in Italian in the classroom. Emphasis on aural comprehension and oral practice in classroom and audio-lingual laboratory.
3 Class Hours, 1 Laboratory Hour
Prerequisite: ITA 102 Beginning Italian

ITA 202 Intermediate Italian II **3 Credits**
Intensive reading of literary works of recognized authors as a basis for topics of conversation in Italian in the classroom. Practice in audio-lingual laboratory.
3 Class Hours, 1 Laboratory Hour
Prerequisite: ITA 201 Intermediate Italian I

ITA 299 Independent Study: Italian **1-3 Credits**
An individualized student project concerned with advanced work in a specific area of Italian. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in Italian

LITERATURE

The Department of English recommends that students complete a composition program before taking literature courses.

LIT 210 Studies in United States Literature I **3 Credits**
History and development of United States literature from colonial period to late 19th Century. Emphasis on several major writers of the period.
3 Class Hours

LIT 211 Studies in United States Literature II **3 Credits**
History and development of United States literature from late 19th Century to the present. Emphasis on several major writers of the period.
3 Class Hours

LIT 214 Studies in British Literature I **3 Credits**
History and development of British literature from the Middle Ages to the 18th Century. Selections of literary merit from prose, drama, poetry.
3 Class Hours

LIT 215 Studies in British Literature II **3 Credits**
History and development of British literature from the beginning of the 18th Century to the middle of the 20th.
3 Class Hours

LIT 220 The World of the Short Story **3 Credits**
An examination of the development of American, British and Continental short stories. Emphasis on theme and structure.
3 Class Hours

LIT 230 American Drama **3 Credits**
Studies in dramatic theories, techniques and thematic problems of the American drama. (Students taking this course may also be interested in THR 101 Fine Arts: Introduction to Theatre and THR 111 Acting.)
3 Class Hours

LIT 233 World Drama **3 Credits**
Studies in dramatic theories, techniques and thematic relationships of the world drama. (Students taking this course may also be interested in THR 101 Fine Arts: Introduction to Theatre and THR 111 Acting.)
3 Class Hours

LIT 240 The Poetic Experience: Sight and Sound **3 Credits**
An exploration of the different modes and moods of poetic expression. A thematic and structural approach to poetry as a total experience.
3 Class Hours

LIT 250 Portraits of Women:
Search for Understanding **3 Credits**
An in-depth examination of what it means to be a woman as presented by representative literary artists, both women and men, in critically acclaimed pieces of literature. Emphasis on 19th and 20th Century material.
3 Class Hours

LIT 253 Psychological Investigation in Literature **3 Credits**
The application of Jungian, Freudian and other psychological theories and insights to selected short stories, novels, and poems to promote more penetrating appreciation of characters' motivations and actions and the literary work in general.
3 Class Hours

LIT 255 Modern Existential Literature **3 Credits**
An investigation of the themes of alienation and the absurd in selected prose and poetry to shed light on man's current existential crisis.
3 Class Hours

LIT 257 Heritage of Modern Literature **3 Credits**
An attempt to define modern literature as an embodiment and development of antique themes and traditions through the comparative study of the epic, the novel and related genre.
3 Class Hours

LIT 260 Detective Fiction — 3 Credits

A critical study of one of the most popular literary forms of our time designed for armchair detectives. Starting with Poe, Conan Doyle (Sherlock Holmes) and other classics in the field, the course traces the development of the detective story from its puzzle-solving beginnings to the modern psychological novel of crime and detection.
3 Class Hours

LIT 263 Children's Literature — 3 Credits

Children's literature with introduction to the variety of books available today and development of standards for evaluating them. Prime concern is to help the student use literature with children creatively, recognizing the importance of language, arts, communication and listening skills in cognitive development.
3 Class Hours

LIT 265 Biblical Literature — 3 Credits

An acquisition of the skills necessary to study the Bible. Emphasis on the Biblical narrative and its relationship to Western culture through reading and analysis. (Not offered in 1979–80 college year).
3 Class Hours

LIT 269 Prison Literature — 3 Credits

An examination of the prison experience through a variety of readings in prose and poetry that focus on man's continuing struggle to understand this social phenomenon.
3 Class Hours

MARKETING COURSES

are under the Accounting heading starting on page 64

MATHEMATICS

MAT 003 Basic Mathematics Review — 3 Credits*

*This is a self-paced mathematics course. Students may enter at any time during the semester. Credit is not applicable toward A.A., A.S., or A.A.S. degrees. Upon successful completion of a required unit, certificate programs may award some credits.
Basic Mathematics Review is designed to give the student proficiency in elementary mathematics and provide a firm foundation for credit courses. It consists of three units allowing each department to select the units needed as prerequisites for its courses or programs.
3 Class Hours

A. Arithmetic and Introduction to Algebra
Arithmetic of whole numbers, fractions and decimals. Percent, measurement, metric units, ratio and proportion. Language of algebra, arithmetic of signed numbers, solving simple equations. Problem solving.

B. Elementary Algebra
Addition, subtraction, multiplication, division and simplification of algebraic expressions. Graphing. Solving linear equations and inequalities in two variables. Solving fractional and quadratic equations. Problem solving.
Prerequisite: Basic Mathematics Review A

C. Geometry and Introduction to Trigonometry
Properties and measurements of angles. Similar and congruent triangles, polygons and circles. Perimeter, area and volume measurements. Use of trigonometric ratios to solve right triangle problems.
Prerequisite: Basic Mathematics Review A

A placement test will be given to determine if a student should enroll in the Basic Mathematics Review sequence or another mathematics course. Placement in Basic Mathematics Review will be based on a student's ability at the time of the test. Programmed material will allow each student to progress at own pace to complete the required units.

MAT 111 Mathematics, a Liberal Art I — 3 Credits

Introduction to the variety and structural beauty of mathematics. Inductive and deductive reasoning, games and number theory, functions and their graphs, large numbers, exponents and logarithms, geometric patterns and symmetry. For Liberal Arts students — recommended for fine arts or humanities majors. Metric units of measure.
3 Class Hours
Prerequisite: Basic Mathematics Review A or equivalent

MAT 112 Mathematics, a Liberal Art II — 3 Credits

Introduction to the variety and structural beauty of mathematics. Mathematical curves in nature and science, combinations, permutations and probability, statistics, statistical graphs, misleading uses of statistics, topology and networks. For Liberal Arts students — recommended for fine arts and humanities majors.
3 Class Hours
Prerequisite: Basic Mathematics Review A or equivalent

MAT 117 Elementary Finite Mathematics with Algebra — 4 Credits

Sets, probability, matrix algebra, graphing, inequalities, linear programming.
4 Class Hours
Prerequisite: Basic Mathematics Review A or equivalent

MAT 121 Finite Mathematics — 3 Credits

Sets and logic, permutations, combinations and probability, vectors and matrices, inequalities and linear programming. The computer language BASIC is taught and used.
3 Class Hours
Prerequisite: Basic Mathematics Review B or equivalent

MAT 122 Introduction to Calculus — 3 Credits

Analytic geometry of line, circle and parabola. Functions and their graphs. Limits and continuity, differentiation — rules and applications, integration — techniques and applications. Exponential and logarithmic functions and applications. Recommended for social science, health science and business students. Not for math majors or science majors in the A.S. degree program.
3 Class Hours
Prerequisite: MAT 139 Algebra or equivalent

MAT 124 Statistics — 3 Credits

Descriptive statistics, organization and presentation of data, measures of central tendency. Variance, standard deviation, binomial distribution, statistical inference. Random sampling, hypothesis testing, confidence intervals, normal distribution, analysis of variance. Chi-square distribution, students t-distribution, correlation and regression.
3 Class Hours
Prerequisite: Basic Mathematics Review A or equivalent

MAT 131 Modern Basic Mathematics I 3 Credits

Algebra of propositions. Algebra of sets. Systems of numeration other than base ten. Properties of the operations of addition and multiplication for the sets of whole numbers, integers and rational numbers. Introduction to number theory. For Liberal Arts Students — recommended for elementary education majors.

3 Class Hours
Prerequisite: MAT 003 Basic Mathematics Review B or equivalent

MAT 132 Modern Basic Mathematics II 3 Credits

Real number system. Informal geometry, congruence, measurement of areas and volumes, basic constructions. Coordinate geometry, lines, circles, equations. Inequalities and linear programming. Simple and conditional probability. Introduction to statistics. For Liberal Arts students — recommended for elementary education majors.

3 Class Hours
Prerequisite: MAT 131 Modern Basic Mathematics I and
MAT 003 Basic Mathematics Review C or equivalent

MAT 139 Algebra 4 Credits

Real and complex numbers, algebraic operations, functions and graphs, exponents and logarithms, linear and quadratic equations, systems of linear equations, linear inequalities, binomial theorem.

4 Class Hours
Prerequisite: Basic Mathematics Review B or equivalent

MAT 140 Trigonometry 4 Credits

Trigonometric functions and their graphs, solution of triangles, trigonometric identities and equations, inverse trigonometric functions, position vectors, polar representation of complex numbers, DeMoivre's theorem.

4 Class Hours
Prerequisite: MAT 139 Algebra or equivalent

MAT 141 College Algebra and Trigonometry 4 Credits

A review of algebra and trigonometry emphasizing computational skills and technical applications. Algebraic operations, functions and graphs, exponents and logarithms, linear equations, system of linear equations and determinants. Trigonometry and the solution of triangles, trigonometric functions and their graphs, quadratic equations, vectors, complex numbers. For engineering technology students.

4 Class Hours

MAT 142 Applied Calculus I 4 Credits

Basic analytic geometry, distance, equations of lines. Limits, continuity and the derivative. Differentiation of polynomials, maxima and minima. Differentials and approximation, applications in kinematics and circuits. The definite integral and applications to finding area, center of gravity, volume of revolution, work done. Approximate integration, differentiating products and quotients, implicit differentiation and related rates, differentiation and integration of logarithmic, exponential, trigonometric and inverse trigonometric functions.

4 Class Hours
Prerequisite: MAT 141 College Algebra and Trigonometry or
MAT 140 Trigonometry

MAT 151 Mathematical Modeling I 4 Credits

Computer techniques for the modeling and solution of problems in arithmetic, algebra and finite mathematics. Topics from number theory, algebra, logic and set theory, solutions of equations and inequalities, permutations and combinations, probability, statistics.

4 Class Hours
Prerequisite: MAT 139 Algebra or equivalent

MAT 161 Pre-Calculus Mathematics 4 Credits

The real number system, inequalities, graphing and the Cartesian Coordinate System, the algebra of functions, polynomial and rational functions, trigonometric functions, inverse functions, exponential and logarithmic functions.

4 Class Hours
Prerequisite: MAT 139 Algebra and MAT 140 Trigonometry or equivalent

MAT 163 Calculus with Analytic Geometry I 4 Credits

Rectangular coordinate system and an introduction to analytic geometry of lines, functions. Differentiation of algebraic functions, applications of the derivative including the theory of extremes and related rates. Integration of polynomials and area between polynomials. Conic sections.

4 Class Hours
Prerequisite: MAT 161 Pre-Calculus Mathematics or
MAT 140 Trigonometry or equivalent

MAT 164 Calculus with Analytic Geometry II 4 Credits

Opportunity, differentiation and integration of trigonometric functions and their inverses. Logarithmic and exponential functions. Differentiation of hyperbolic functions, parametric equations, polar coordinates. Techniques of integration, applications of integration including arc length, volumes of solids of revolution and center of gravity of plane figures and certain solids.

4 Class Hours
Prerequisite: MAT 163 Calculus with Analytic Geometry I

MAT 171 Engineering Calculus with Analytic Geometry I 4 Credits

Absolute value and inequalities, equations of a line and a circle. Limits, continuity, derivatives of algebraic functions, applications to curve sketching, related rates, maxima and minima. Antidifferentiation and applications to the solution of differential equations with variables separate. The definite integral and the Fundamental Theorem of Calculus.

4 Class Hours

MAT 172 Engineering Calculus with Analytic Geometry II 4 Credits

Applications of the definite integral. Logarithmic, exponential and trigonometric functions. Methods of integration, plane analytic geometry and conic sections. Hyperbolic functions, polar coordinates, indeterminate forms, improper integrals.

4 Class Hours
Prerequisite: MAT 171 Engineering Calculus with
Analytic Geometry I

MAT 241 Applied Calculus II 3 Credits

Integration by substitution, by partial fractions and by parts. Improper integrals, parabola, hyperbola, ellipse and translation of axes. First and second order linear differential equations. Partial derivatives, iterated and double integrals. Polar coordinates, curve plotting and area. Sequences, series, convergence tests, power series and Fourier series.

3 Class Hours
Prerequisite: MAT 142 Applied Calculus I

MAT 243 Differential Equations 4 Credits

Equations of order one, integrating factors, substitution method, Bernoulli's equation, linear equations of higher order with constant and undetermined coefficients, variation of parameters, inverse differential operators, the Laplace transform.

4 Class Hours
Prerequisite: MAT 241 Applied Calculus II or
MAT 164 Calculus with Analytic Geometry II

MAT 246 Applied Linear Algebra — 4 Credits

A non-calculus study of matrices, determinants, vector spaces and linear transformations.

4 Class Hours

Prerequisite: MAT 241 Applied Calculus II

MAT 252 Mathematical Modeling II — 4 Credits

Computer techniques for the modeling and solutions of problems in numerical analysis. Topics include error analysis, roots of equations, linear and non-linear systems of equations, numerical integration, curve fitting, numerical solution of ordinary differential equations.

4 Credits

Prerequisites: MAT 151 Mathematical Modeling I and
either MAT 142 Applied Calculus I or
MAT 163 Calculus with Analytical Geometry I or
MAT 171 Engineering Calculus with Analytical Geometry I

MAT 263 Calculus with Analytic Geometry III — 4 Credits

Limits and continuity, delta epsilon proofs, indeterminate forms. Sequences, series, convergence tests, power series, Taylor's theorem. Analytic geometry and vectors in three-dimensional space including equations of lines, scalar products, vector products, equations of planes, differentiation, space curves, surfaces, cylindrical and spherical coordinates. Functions of several variables, limits, continuity, partial derivatives, tangents and normals, directional derivative, gradient, maxima and minima. Multiple integrals and applications.

4 Class Hours

Prerequisite: MAT 164 Calculus with Analytic Geometry II

MAT 264 Linear Algebra — 4 Credits

Linear equations and matrices, real vector spaces, the algebra of linear transformations and matrices, determinants, eigenvalues and eigenvectors.

4 Class Hours

Prerequisite: MAT 164 Calculus with Analytic Geometry II or
MAT 172 Engineering Calculus with Analytic Geometry II or
MAT 241 Applied Calculus II

MAT 266 Introduction to Higher Mathematics — 3 Credits

Exposure to basic mathematical methods and concepts. Sets, sequences, mappings, convergence. Preparation for analysis, topology and modern algebra.

3 Class Hours

Prerequisite or corequisite: MAT 263 Calculus with Analytic Geometry III or
MAT 271 Engineering Calculus with Analytic Geometry III or
permission of instructor

MAT 271 Engineering Calculus with Analytic Geometry III — 4 Credits

Solid geometry, lines and planes, vector calculus in space, quadric surfaces, partial differentiation, directional derivatives, gradient, line integrals, multiple integrals, infinite series, complex numbers and functions.

4 Class Hours

Prerequisite: MAT 172 Engineering Calculus with Analytic Geometry II

MAT 272 Differential Equations with Linear Algebra — 4 Credits

First order differential equations. Matrices, determinants and solutions of systems of linear equations. Vector spaces, Wronskians, linear transformations and differential operations. Characteristic values and vectors, real symmetric matrices, functions of matrices. Homogeneous and nonhomogeneous linear differential equations with constant coefficients, undetermined coefficients and variations of parameters. Matrix formulation of linear systems of differential equations and solution by characteristic values, the exponential matrix function and nonhomogeneous linear systems. Series solutions of differential equations at ordinary and singular points.

4 Class Hours

Prerequisite: MAT 271 Engineering Calculus with Analytic Geometry III or
MAT 263 Calculus with Analytic Geometry III

MAT 299 Independent Study — 1–4 Credits

The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.

Prerequisite: Department Chairperson Permission

MECHANICAL TECHNOLOGY

MET 113 Engineering Drawing I — 2 Credits

Basic course that includes lettering, line and instrument exercises, orthographic projection, sketching, dimensioning, auxiliary views, sections, threads, fasteners.

1 Class Hour, 2 Laboratory Hours

MET 114 Engineering Drawing II — 2 Credits

Fits and tolerances, developments and intersections, pictorial drawings, true position dimensioning (ANSI standards), assembly drawings, graphical design using standard industrial parts and descriptive geometry.

1 Class Hour, 2 Laboratory Hours

Prerequisite: MET 113 Engineering Drawing I

MET 115 Graphics — 2 Credits

Basic course that includes lettering, orthographic projection, dimensioning, sections, auxiliary views by instrument and free hand. True length, true size, relationships between lines and planes. For Engineering Science students.

1 Class Hour, 2 Laboratory Hours

MET 121 Manufacturing Processes I — 3 Credits

A basic study of manufacturing materials and processes, such as casting metal, production of ferrous and non-ferrous metals and shape changing processes of hot and cold working techniques. Oxyacetylene, arc, resistance welding. Machine tool operation, instrumentation and measurement.

2 Class Hours, 2 Laboratory Hours

MET 122 Manufacturing Processes II — 2 Credits

Abrasives and grinding, indexing, gearing, special machining processes such as numerical control and electrical discharge machining. Advanced elements of machine tool operation including the use of grinding machines, turret lathe, honing, lapping.

1 Class Hour, 3 Laboratory Hours

Prerequisite: MET 121 Manufacturing Processes I

MET 129 Survey of Engineering Laboratories 3 Credits

Engineering materials, physical tests and manufacturing processes encountered in mechanical technology laboratories. Lectures, demonstrations and participation in manufacturing processes, casting, welding and forging, metallurgy, strength of materials, fluids and thermodynamics, technical sketching and blueprint reading, scientific calculators. For Secretarial Science students.

2 Class Hours, 2 Laboratory Hours

MET 132 Applied Mechanics 4 Credits

STATICS: Free body diagram, trusses, friction, centroids, moments of inertia.

DYNAMICS: Motion of particles and bodies without consideration of the forces required to produce or maintain motion (kinematics), unbalanced forces and the motion they produce (kinetics), work and energy, impulse and momentum.

4 Class Hours
Prerequisites: PHY 141 Physics and
MAT 141 College Algebra and Trigonometry or
equivalent or department chairperson approval

MET 134 Fundamentals of Stationary Engineering 3 Credits

A course in general background information in basic topics relating to power plant engineering. Primary emphasis on the operation and maintenance of boiler room equipment including steam cycling-condensing, related mathematics, boiler mountings and bracings, boiler operation, inspection and repair, chemistry of combustion and feedwater treatment. Satisfactory completion of the course is one of the requirements to qualify for the New York State Civil Service Fireman examination.

2 Class Hours, 1 Laboratory Hour

MET 152 Engineering Materials 4 Credits

Physical and chemical properties of engineering materials. Mechanical tests, structure, phases, relationship and reactions within metallic and non-metallic structure.

4 Class Hours

MET 224 Thermodynamics 3 Credits

Property and energy relationships in steady flow processes for vapors, power and refrigeration cycles, nozzles and diffusers. Heat transfer in plane and circular geometry, film coefficients, heat exchangers.

2 Class Hours, 3 Laboratory Hours
Prerequisite: MET 241 Fluid Mechanics and Thermodynamics

MET 235 Strength of Materials 3 Credits

Normal and shear stress and strain, elastic and plastic deformation, torsion, stress in thin-walled cylinders, joints, shear force and bending moment in beams, beam stresses, beam deflection, multi-directional plane stress.

2 Class Hours, 3 Laboratory Hours
Prerequisite: MET 132 Applied Mechanics

MET 238 Mechanical Design 4 Credits

An analysis of machine motion and the design of machine elements. Analysis of motion of linkages and mechanisms for displacement, velocity and acceleration relationships. Design and analysis of weldments, fasteners, springs, power screws, couplings, shafts, clutches, gears and bearings.

3 Class Hours, 3 Laboratory Hours
Prerequisite: MET 235 Strength of Materials

MET 241 Fluid Mechanics and Thermodynamics 3 Credits

FLUID MECHANICS: Fluid statics and dynamics, steady flow energy equations, laminar and turbulent flow viscosity and fluid friction, flow measurement.

THERMODYNAMICS: Perfect gas law, specific heats, property and energy relationships in non-flow and steady flow processes for gases, internal combustion engine cycles, nozzles and diffusers, gas turbines.

2 Class Hours, 3 Laboratory Hours
Prerequisite: MET 132 Applied Mechanics

MET 245 Energy Conservation 2 Credits

Emphasis on developing an understanding of energy, its uses and the problems involved with its exploration, conversion and transmission. The influence of energy on man and his environment. A class tour to industries which have energy control devices and energy management programs.

1 Class Hour, 2 Laboratory Hours

MET 246 Refrigeration and Air Conditioning 3 Credits

Energy transfer systems and controls used for cooling an environment below the temperature of its surroundings. Air and humidity calculations, heat transfer and transmission coefficients, heating loads, distribution systems, refrigeration systems, cooling load and air conditioning calculations, controls and control systems.

3 Class Hours
Prerequisite: MET 241 Fluid Mechanics and Thermodynamics

MET 247* Air Conditioning and Refrigeration 3 Credits

Energy transfer systems and controls used for cooling an environment below the temperature of its surroundings. Air and humidity calculations, heat transfer and transmission coefficients, heating loads. Thermodynamics and fluid flow concepts essential for satisfactory treatment of the above areas of study.

3 Class Hours
Prerequisite: PHY 141 Physics

MET 248 Fluid Power 3 Credits

Static and dynamic fluid force systems used for both actuation and control of mechanical devices. Applications of frequently used fluid power components and circuits.

3 Class Hours
Prerequisite: MET 241 Fluid Mechanics and Thermodynamics

MET 249* Fluid Power 3 Credits

Fluid statics and fluid dynamics preceding a treatment of static and dynamic force systems used for both actuation and control of mechanical devices. Applications of frequently used fluid power components and circuits.

3 Class Hours
Prerequisite: MET 132 Applied Mechanics

MET 252 Engineering Materials and Industrial Processes 4 Credits

Properties, applications and processing of engineering materials including metallic, non-metallic, and composites.

3 Class Hours, 3 Laboratory Hours
Prerequisites: MET 121 Manufacturing Processes I and
MET 235 Strength of Materials

***TAUGHT EVENINGS ONLY**

MET 253* Engineering Materials and Industrial Processes 3 Credits

Properties, applications and processing of engineering materials including metallic, non-metallic and composite materials.
2 Class Hours, 2 Laboratory Hours
Prerequisite: MET 121 Manufacturing Processes I and MET 235 Strength of Materials

MET 255* Introduction to Plastics Engineering 3 Credits

Basic concepts of chemical structure and the physical properties of thermoplastic and thermoset materials including additives in plastics, heat transfer and flow behavior of plastic melt, testing and property measurement, processing techniques with emphasis on extrusion and injection molding, defect analysis and troubleshooting, process control and instrumentation, material selection and application, commercial plastics, trade names, suppliers and prices.
3 Class Hours

MET 261 Engineering Statistics and Quality Control 3 Credits

Measures of central tendency, variance, standard deviation, binomial distribution, normal distribution, statistical inference, hypothesis testing, confidence intervals, chi-square and students t-distribution, correlation and regression, similar elements of statistics as they pertain to engineering problems. Control chart analysis.
2 Class Hours, 2 Laboratory Hours
Prerequisite: MAT 141 College Algebra and Trigonometry or MAT 139 Algebra

MET 272 Automotive Systems 3 Credits

Functional elements of the automobile. The fuel system, ignition system, the engine cycle, pollution control system, the chassis and basic elements of engine tuneup.
2 Class Hours, 2 Laboratory Hours

MET 280* Management Decisions 2 Credits

Objective criteria and evaluations in making management decisions. Currently accepted procedures to conceive management models and systems.
2 Class Hours

MET 285* Time, Motion and Wage Study 2 Credits

Analysis of time spent and methods used for industrial tasks. Relation to wage structure on individual and plant-wide basis.
2 Class Hours
Prerequisite: MAT 139 Algebra

MET 286* Production Control 2 Credits

Planning, scheduling and routing of goods through a plant from raw materials to finished products. Production control principles, the control of manufacturing processes.
2 Class Hours
Prerequisite: MAT 139 Algebra

MET 287* Plant Layout and Materials Handling 2 Credits

Plant arrangement as it influences industrial operations. Assembling data, coordinating operations, developing operational layouts, evaluative arrangements. Materials handling requirements, planning and evaluation.
2 Class Hours
Prerequisite: MAT 139 Algebra

MET 295 Seminar 1-3 Credits

An opportunity for the interested student to become involved with the process of research, formal paper preparation, formal delivery and defense of ideas presented. Also a critical evaluation of ideas set forth by others.
Prerequisite: As established by the Department Chairperson

MET 299 Independent Study 2-3 Credits

The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.
Prerequisite: Approval of Department Chairperson

MEDICAL LABORATORY TECHNOLOGY

MLT 111 Introduction to Clinical Laboratory Methods and Practices 2 Credits

To acquaint the medical laboratory student with the history and scope of clinical laboratory medicine. Responsibility and professional ethics to self, employer, physician and patient. Field trips to clinical laboratory facilities. Basic clinical laboratory procedures and methodologies for urinalysis performed in laboratory sessions.
1 Class Hour, 2 Laboratory Hours

MLT 112 Hematology 3 Credits

Anatomy and pathophysiology of the blood and hemopoietic tissue. Techniques and procedures for studying and evaluating blood in health and disease. Laboratory work includes specialized hematological techniques and procedures.
2 Class Hours, 4 Laboratory Hours
Prerequisite: MLT 111 Introduction to Clinical Laboratory Methods and Practices or permission of instructor

MLT 211 Clinical Chemistry I 4 Credits

Principles and methods of analytical clinical chemistry applied to the physiochemical measurements of body function in health and disease. Emphasis on those chemical tests related to excretion, digestion, metabolism and protein synthesis. Laboratory work includes the related chemical tests and specialized analytical instrumentation.
2 Class Hours, 6 Laboratory Hours
Prerequisite: One year general chemistry and one year biology or permission of instructor

MLT 212 Clinical Chemistry II 4 Credits

A continuation of MLT 211 Clinical Chemistry I. Emphasis on those chemical tests related to liver function, blood gases, pH and electrolyte balance, enzyme, hormones in health and disease. The laboratory work includes the specific related chemical test and specialized analytical instrumentation.
2 Class Hours, 6 Laboratory Hours
Prerequisite: MLT 211 Clinical Chemistry I or permission of instructor

MLT 222 Clinical Physiology 2 Credits

Emphasis on the utilization of clinical laboratory testing methods in identifying diseases and dysfunction of cellular and body processes. The disordered biochemistry of the disease processes are studied from a case-oriented approach. The case studies cover diseases or dysfunction related to respiration, digestion, circulation, metabolism and excretion.
2 Class Hours
Prerequisite: Senior year status or permission of instructor

*TAUGHT EVENINGS ONLY

MLT 232 Blood Banking and Serology 3 Credits

Introduction to blood banking. Blood typing, ABO, Rh, antiglobulin tests, crossmatching, incompatibilities resulting from pregnancies or transfusions. Selected serological diagnostic procedures and principles.

2 Class Hours, 2 Laboratory Hours
Prerequisite: MLT 112 Hematology or permission of instructor

MLT 251 Microbiology II (Diagnostic) 4 Credits

A continuation of BIO 150 Microbiology I. Emphasis on infectious diseases, communicability, diagnosis and identification of causative organisms, including bacteriology and parasitology.

3 Class Hours, 4 Laboratory Hours
Prerequisite: BIO 150 Microbiology I or permission of instructor

MEDICAL OFFICE ASSISTANT

MOA 102 Medical Assisting Science 2 Credits

Introduction to medical specialties and problems with related vocations. Responsibility of medical assistant to self, physician and patient. Principles of professional ethics. Professional affiliation. Field trips. For Medical Office Assistant students.

2 Class Hours

MOA 112 Standard First Aid and Personal Safety, Cardio-Pulmonary Resuscitation 1 Credit

The causes, care and prevention of accidental/emergency life-saving situations. Mastery level of learning for the proficiency of basic skills. Cardio-pulmonary resuscitation prepares students to recognize, evaluate and initiate care for cardiac emergencies. Certification by American Red Cross or American Heart Association.

2 Laboratory Hours

MOA 115 Medical Assisting Procedures 4 Credits

Clinical procedures of medical assisting in the physician's office. Use and management of diagnostic instruments and equipment. Related patient care, professional ethics and nomenclature. For Medical Office Assistant students.

3 Class Hours, 2 Laboratory Hours
Prerequisite: MRT 105 Medical Terminology
or consent of Instructor

MOA 201 Medical Assisting Procedures 4 Credits

Laboratory introduction to microscopic analysis of blood and urine. Also simple blood chemistry tests in medical office. Study of formation of blood cells and urine. For Medical Office Assistant students.

2 Class Hours, 4 Laboratory Hours
Prerequisite: BIO 132 Human Biology II

MOA 206 Medical Office Management 4 Credits

Medical office administrative procedures, such as accounting principles and practices, patient health records, insurance forms, banking and postal services, payroll records, patient fees and ledger cards, office machines. Mechanics of applicable medical correspondence including letters, manuscripts. Emphasis on letters of inquiry and reply, claims and adjustment, credit and collection. For Medical Office Assistant students.

3 Class Hours, 3 Laboratory Hours
Prerequisites: MOA 102 Medical Assisting Science and
MRT 107 Medical Transcription

MOA 210 Pharmacology 2 Credits

A practical course relevant to medical curriculums. Emphasizes knowledge of prescriptions and prescription writing. Basic principles of mathematics of pharmacy. Drugs governed by U.S.P. standards which are in common use and their generic-pharmaceutical relationship. Drug grouping and action relevant to human physiology. For Medical Office Assistant and Medical Record Technology students.

2 Class Hours
Prerequisite: BIO 132 Human Biology II

MOA 211 Medical Assisting Procedures 4 Credits

Advanced technical procedures in medical assisting specifically oriented to the various medical specialties. Techniques of electrocardiography, audiometry and physical therapy. Field trips and practical experiences give additional background outside of the classroom. For Medical Office Assistant students.

2 Class Hours, 4 Laboratory Hours
Prerequisite: BIO 132 Human Biology II

MOA 245 Directed Practice 5 Credits

Directed practical experience in the physician's offices, medical centers, school health departments, rehabilitation clinics, and other health care institutions, weekly seminars. For Medical Office Assistant students.

1 Class Hour, 16 Laboratory Hours
Prerequisites: MOA 206 Medical Office Management and
MOA 211 Medical Assisting Procedures.
MOA 201 Medical Assisting Procedures and MOA 210 Pharmacology must be taken previously or concurrently

MEDICAL RECORD TECHNOLOGY

MRT 101 Medical Record Science 3 Credits

Introduction to the historical development of the health care field and to the medical record department with an overview of the medical record professional association. Numbering and filing systems and methods. Storage and retrieval systems. Definitions of, standards for, and development of a medical record as to content, format, evaluation and completion.

2 Class Hours, 2 Laboratory Hours

MRT 105 Medical Terminology I 2 Credits

Medical terminology as correlated with anatomical systems. Suffixes, prefixes, root words and use of the medical dictionaries. For Medical Office Assistant and Medical Record Technology students.

2 Class Hours

MRT 107 Medical Transcription 2 Credits

Designed to introduce the student to the knowledge and skills required for medical machine transcription in a health care facility. A practical experience in transcribing including proper format and a variety of medical reports.

4 Laboratory Hours
Prerequisite: MRT 105 Medical Terminology I

MRT 110 Medical Record Science 4 Credits

Hospital statistics, sources, definitions, collection, reporting and presentation of data. Purposes of classifying diseases and operations, difference between and historical development of nomenclature and classification systems. Value and use of indexes and registers including the Tumor Registry.

2 Class Hours, 4 Laboratory Hours
Prerequisite: MRT 101 Medical Record Science

MRT 115 Medical Terminology II — 2 Credits

A continuation of MRT 105 Medical Terminology I. Emphasis on terminology associated with the cardiovascular, digestive, respiratory, genito-urinary and endocrine systems.
2 Class Hours
Prerequisite: MRT 105 Medical Terminology I

MRT 144 Directed Practice — 4 Credits

Directed summer practical experience in the hospital medical record department. Development of insight and skills into the basic medical record procedures. Graduation requirement.
40 Laboratory Hours per week for 4 Weeks
Prerequisite: MRT 110 Medical Record Science

MRT 202 Medical Record Science — 3 Credits

Importance of the medical record as a legal document. A comprehensive review of the organization of the medical staff, primarily within the hospital. Background and medical record keeping in long term care facilities. Certification by accrediting and governmental agencies.
2 Class Hours, 2 Laboratory Hours
Prerequisites: MRT 110 Medical Record Science and
BIO 132 Human Biology II

MRT 208 Advanced Medical Transcription — 1 Credit

Review of medical terminology emphasizing specialized terminology. Advanced medical transcription techniques through the use of recorded history and physical examinations, discharge summaries, consultation reports, operative reports and outpatient notes.
3 Laboratory Hours
Prerequisite: MRT 107 Medical Transcription

MRT 210 Medical Record Science — 3 Credits

Introduction to the history of medicine. Ambulatory health care and its implications on medical record practice. Retrospective medical auditing. Principles of management and the role of the supervisor in management of a medical record department.
2 Class Hours, 2 Laboratory Hours
Prerequisite: MRT 202 Medical Record Science

MRT 216 Clinical Practicum — 1 Credit

Designed to enable the students to utilize the knowledge and skills obtained in the classroom. Includes performing the functions of an actual medical record department and the use of a computer.
2 Laboratory Hours
Prerequisites: MRT 110 Medical Record Science
and MRT 144 Directed Practice

MRT 245 Directed Practice — 4 Credits

Directed practice experience in the hospital and related affiliation sites. Correlated with MRT 210 Medical Record Science to develop insight and skills into advanced medical record procedures.
16 Laboratory Hours
Prerequisites: MRT 202 Medical Record Science and
MRT 144 Directed Practice

MRT 295 Medical Record Seminar — 2 Credits

Detailed study and analysis of specific problems encountered in the administration of a medical record department. Correlated with directed clinical practice. Case study and extensive literature review.
2 Class Hours

MUSIC

MUS 101 Fine Art: Introduction to Music — 3 Credits

Basic elements of music common to all forms of musical expression. Emphasis on developing listening habits, which bring the student to an informed awareness and understanding of music. Attendance at concerts and recitals.
3 Class Hours

MUS 105 Music Theory I — 3 Credits

A beginning course in music theory, including basic rudiments of music. Pitch and rhythmic notation, scales and intervals. Ear training through melodic and rhythmic drills and dictation.
3 Class Hours

MUS 106 Music Theory II — 3 Credits

Continuation of Music Theory I. Traditional harmony, exercises in melodic, rhythmic and harmonic dictation, aural analysis, beginning composition.
3 Class Hours
Prerequisite: MUS 105 Music Theory I or consent of instructor

MUS 110 17th and 18th Century Music — 3 Credits

Music and musical styles of the 17th and 18th Centuries. Emphasis on the composers and their styles and the relationship of music to the social, political and other cultural reforms of the period. (Not offered in 1979-80 academic year).
3 Class Hours
Prerequisite: MUS 101 Introduction to Music or consent of instructor

MUS 111 19th Century Music — 3 Credits

Important musicians and musical styles of the Romantic Period. Emphasis on developments in piano literature, the symphony orchestra and opera. Listening to selected recordings and attendance at local concerts. (Not offered in 1979-80 academic year).
3 Class Hours
Prerequisite: MUS 101 Introduction to Music or consent of instructor

MUS 112 20th Century Music — 3 Credits

Important musicians and musical styles in the 20th Century. Emphasis on the trends and development of music in America. Leading European composers. (Not offered in 1979-80 academic year).
3 Class Hours
Prerequisite: MUS 101 Introduction to Music or consent of instructor

MUS 190 The College Choir — 1 Credit

Students who sing in the College Choir receive one credit per semester. See page 24.

MUS 191 Instrumental Musical Association — 1 Credit

Students who play in the musical groups sponsored by the Instrumental Music Association receive one credit per semester. See page 24.

MUS 299 Independent Study: Music — 1-3 Credits

An individual student project concerned with advanced work in a specific area of music. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in music

NURSING

A GRADE OF C OR BETTER IS REQUIRED TO PASS EACH NURSING COURSE

ADN 100 Meeting Basic Human Needs 7 Credits

Introduction to nursing concepts and principles. The total human being incorporating biophysiological and psychosocial components. Emphasis on maintaining homeostasis within the illness/wellness continuum. The needs approach, based on Maslow's Hierarchy of Human Needs, is emphasized. Skills in providing safe bedside nursing care, such as simple treatments, pharmacology and basic nutrition. Integrating knowledge of communication skills, nursing process, problem solving, mental mechanisms, normal responses to stress, crisis intervention, body responses to pathology. Adaptation of nursing intervention directed toward meeting basic needs of the chronically ill, the aging and those individuals facing death.
5 Class Hours, 6 Laboratory Hours

ADN 101 Nursing Care During the Life Cycle 7 Credits

The Life Cycle from conception to middle-age. Correlating basic human needs and the developmental tasks in each age group. The family cycle, as one of the tasks of the young adult. Emphasis on preparation for parenthood, the experience of parenthood, and the psychosocial implications of the young family. Learning principles identified and incorporated into the nursing process. Situational and maturational crises as normal aspects of the life cycle. Adaptation of nursing intervention directed toward meeting basic needs of the middle aged. Nursing intervention for diagnostic testing.
5 Class Hours, 6 Laboratory Hours
Prerequisites: ADN 100 Meeting Basic Human Needs

ADN 203 Immobility Concepts 4 Credits

The nursing process as it meets the needs of individuals experiencing complex physiological and psychological problems due to immobility. Concepts of neurological, orthopedic and sensory deprivation nursing. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.
(Half Semester)
5 Class Hours, 9 Laboratory Hours
Prerequisites: ADN 101 Nursing Care During Life Cycle and
BIO 132 Human Biology II

ADN 204 Regulatory Concepts 4 Credits

The nursing process is applied to the needs of individuals with disturbances of the regulatory physiological mechanisms. Content includes nursing concepts of stress, fluids and electrolytes, endocrinology. Related health behavior and teaching. Extended campus laboratory experience is correlated. Successful achievement in the extended laboratory is required.
(Half semester)
5 Class Hours, 9 Laboratory Hours
Prerequisites: ADN 101 Nursing Care During Life Cycle and
BIO 132 Human Biology II

ADN 205 Psychological Concepts I 2 Credits

The nursing process as it meets the needs of individuals experiencing psychological stress. Psychiatric nursing concepts applied to behavioral disturbances. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.
1 Class Hour, 3 Clinical Hours
Prerequisites: ADN 101 Nursing Care During Life Cycle and
BIO 132 Human Biology II

ADN 206 I, I and O Concepts 4 Credits

The nursing process as it meets the needs of individuals with complex physiological and/or psychological stress due to problems of inflammation, infection and obstruction. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.
(Half semester)
5 Class Hours, 9 Clinical Hours
Prerequisites: ADN 101 Nursing Care During Life Cycle and
BIO 132 Human Biology II

ADN 207 Oxygenation Concepts 4 Credits

The nursing process is applied to needs of individuals experiencing disturbances of oxygenation. Broad concepts applied to problems of the hemopoietic, respiratory, vascular and cardiac systems. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.
(Half semester)
5 Class Hours, 9 Clinical Hours
Prerequisites: ADN 101 Nursing Care During Life Cycle and
BIO 132 Human Biology II

ADN 208 Psychological Concepts II 2 Credits

Continued application of the nursing process as it meets the needs of individuals experiencing psychological stress. Content includes psychiatric concepts applied to behavioral changes. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.
1 Class Hour, 3 Laboratory Hours
Prerequisites: ADN 101 Nursing Care During Life Cycle and
BIO 132 Human Biology II and ADN 205 Psychological Concepts I

ADN 295 Nursing Seminar 2 Credits

Broad survey course examining the effects of a changing society upon the delivery of health care. Topics to be chosen by the students and presented by them. The National League for Nursing Achievement exams are a guide for individual's further study before taking the New York State Board test pool for registration.
2 Class Hours
Prerequisites: ADN 203 Immobility Concepts,
ADN 204 Regulatory Concepts and ADN 205 Psychological Concepts I

PARALEGAL ASSISTANT

PLA 100 Introduction to Paralegal Profession I 3 Credits

Local, state and federal courts, introduction to jurisprudence and administrative agencies and their functions and procedures. Introduction to contract, tort, negligence, criminal, criminal procedure and real property law. Legal terminology. (Formerly LGS 100).
3 Class Hours

PLA 101 Introduction to Paralegal Profession II 3 Credits

Role of the paralegal and the lawyer, with emphasis on the duties and obligations of each, including management, accounting, records, documents, equipment and research techniques. Legal terminology. (Formerly LGS 101).
3 Class Hours

PLA 102 Introduction to Paralegal Profession III — 3 Credits

Comprehensive study of family, surrogate, wills and estates, agency and partnership, bankruptcy, corporate law, commercial paper and workmen's compensation law, including procedures and practices of each. Legal terminology. (Formerly LGS 102).

3 Class Hours

PLA 120 Legal Office Procedure — 3 Credits

Various tasks performed by the paralegal, such as systems and procedures, legal interviewing, investigation, litigation assistance, legal research and analysis, legal drafting and analysis, law office administration, informal advocacy.

3 Class Hours

PLA 200 Real Property Law — 3 Credits

Comprehensive survey of law of real property emphasizing practical application to a paralegal function. Analysis of forms of deeds, bonds, notes, mortgages, assignments, discharges, purchase of contracts, leases, options. Training in searching title, basic understanding of abstracts of title, real property litigation, estates, condemnation and foreclosure.

3 Class Hours

PLA 205 Techniques of Research — 3 Credits

Development of research skills through the use of digests, encyclopedias, reporter systems and practice manuals. Arrangement, use and maintenance of a law library (including the Supreme Court Library). All legal references, for assistance in diverse phases of law and the operation of those agencies and institutions. (Formerly LGS 200).

3 Class Hours

Prerequisite: PLA 100 or 101 or 102 Introduction to Paralegal Profession or 2 years experience in a law office.

PLA 210 Legal Drafting — 3 Credits

Analysis of legal documents for writing style, clarity of meaning, conciseness, various types of composition of formal and informal letter writing, memos, reports. Refinement of basic communication skills.

3 Class Hours

Prerequisite: ENG 110 Written Expression I

PLA 215 Estates, Probates and Trusts — 3 Credits

Disposition of decedent's property, law of intestate succession, execution and probate of wills, nature and creation of trusts and the administration of estates and trusts, estate and gift tax preparation.

3 Class Hours

PLA 220 Contracts — 3 Credits

The law of contracts, their historical significance, formation, validity, interpretation, transfer of contractual rights. Assignment, third party beneficiaries, discharge, breach and remedies. (BUS 118 Business Law I may be substituted).

3 Class Hours

PLA 230 Domestic Relations — 1 Credit

The marriage contract, spouses' rights and obligations, void marriage, voidable marriage, annulment, separation, divorce, support, alimony and custody of children.

1 Class Hour

PLA 240 Corporate Law — 1 Credit

Types, uses and organization of the corporation, antitrust and securities law, mergers and consolidation, liquidation and dissolution.

1 Class Hour

PLA 250 Municipal Law — 1 Credit

Structure and operations of local government in New York State. Evolution of local government in New York during the first two centuries of its existence. Laws, ordinances and operations.

1 Class Hour

PLA 260 Labor-Management Relations (Labor Law) — 1 Credit

Labor-management relations in the public and private sectors. Taft-Hartley Act, National Labor Relations Act and Wagner Act, unfair labor practices, labor contracts, arbitration and mediation, availability of injunctions in labor disputes.

1 Class Hour

PLA 270 Vehicle and Traffic Law — 1 Credit

Regulations of traffic within the State of New York. Emphasis on violations and traffic-related misdemeanors resulting from violation of the rules of the road and court proceedings resulting therefrom.

1 Class Hour

PLA 280 Litigation and Trial Preparation — 1 Credit

Intake procedures, systems and analysis, concepts of jurisdiction and venue, parties to an action, pleadings, pre-trial procedures, motions and special practice, special proceedings, trials, judgments and appeals.

1 Class Hour

PHILOSOPHY

PHI 101 Philosophical Problems — 3 Credits

Basic problems of philosophy, such as **a priori** knowledge, the reality of the physical world, morality, the mind-body relationship, freedom and the supernatural. (Not offered in 1979–80 academic year).

3 Class Hours

PHI 102 Introduction to Philosophy — 3 Credits

Meaning of philosophy, suggestions for reading philosophy, informal logic, methodology and basic philosophical terms including idealism, dualism, naturalism.

3 Class Hours

PHI 103 Philosophy of Mind — 3 Credits

Theories of major philosophers as to the nature and limits of human knowledge and the nature of reality. Problem of knowledge of the physical world, the mind-body problem, free-will problem, existentialist's view of man. PHI 102 Introduction to Philosophy recommended as a prerequisite.

3 Class Hours

PHI 104 Philosophy of Religion — 3 Credits

Relation of religion and philosophy and an investigation of different concepts of God. Analysis of religious types and experiences, different attempts to justify religious beliefs. Investigation of the logic of religious experience through an analysis of the leading ideas in the philosophy of religion both as an historical and contemporary phenomenon. PHI 102 Introduction to Philosophy recommended as a prerequisite.

3 Class Hours

PHI 111 Humanities **3 Credits**
Critical analysis of human development from the early beginnings to the present state through a thematic investigation of literature, philosophy, history and the arts. Classical, Medieval, Renaissance and Metaphysical Periods.
3 Class Hours

PHI 112 Humanities **3 Credits**
Critical analysis of human development from the early beginnings to the present state through a thematic investigation of literature, philosophy, history and the arts. Neoclassical, Romantic, Victorian, Early Modern and Late Modern Periods.
3 Class Hours

PHI 120 Verbal Reasoning **3 Credits**
To improve the students' ability in reasoning. Concentration on qualification, symbols, ambiguity, analysis and semantics. (Not offered in 1979-80 academic year).
3 Class Hours

PHI 201 Ethics **3 Credits**
Main classical and modern ethical theories, including such theorists as Plato, Aristotle, Spinoza, Mill, Kant, Moore, Toulmin, Ayer, Westermarck. Comparison and contrast of normative and meta-ethical theories, the good life and how one should act, the meaning of moral judgments and the criteria of validity, justification of moral beliefs and the grounds of moral responsibility. PHI 102 Introduction to Philosophy recommended as a prerequisite.
3 Class Hours

PHI 202 Logic **3 Credits**
Analysis and practical application of the elements of logic as they apply to thinking on both a linguistic and formal level. Forms of argument, informal and formal fallacies, significance of the emotions on decision making, inductive and deductive processes.
3 Class Hours

PHI 203 Philosophical Issues in American Education **3 Credits**
Philosophy of selected American educators, with attention on the historical development of the American educational system. Brief review of educational outlooks from antiquity to the present, including Plato, Aristotle, Rousseau. Analysis of educational issues and of key terms in education from philosophical perspective. The nature of the individual, the school and society and the underlying philosophical interrelations that may exist. PHI 102 Introduction to Philosophy recommended as a prerequisite. (Not offered in 1979-80 academic year).
3 Class Hours

PHI 204 Comparative Religions: Living Religions of the East **3 Credits**
Survey of the major religions of the Eastern societies. Comparison of their similarities and differences. Focus on the contributions of religion to society in everyday living, and its influence on thinking, culture and arts. Areas covered are primitive religions, the religions of India, Persia, Indochina, China, Japan. (Not offered in 1979-80 academic year).
3 Class Hours

PHI 205 Comparative Religions: Living Religions of the West **3 Credits**
Survey of the major religions of the West. An examination of central beliefs, such as the belief that God is a Personal God and that there is life after death. Comparison made of their similarities and differences. Focus on the contributions of religion to society in everyday living, and its influence on the thinking, culture and arts of Western society. Areas covered are Zoroastrianism, Judaism, Christianity and Islam. (Not offered in 1979-80 academic year).
3 Class Hours

PHI 206 Social and Political Philosophy **3 Credits**
A philosophical study of the social/political organization of society by examining such topics as justice, authority, leadership, individual rights, and of the relationship between the state and various social institutions, such as family, business, church, and schools.
3 Class Hours

PHI 299 Independent Study: Philosophy **1-3 Credits**
An individual student project concerned with advanced work in a specific area of philosophy. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in philosophy

PHYSICAL EDUCATION

PED 100 Archery **½ Credit**
Fundamentals of shooting — seven-step approach. Proper target shooting technique and form stressed.
4 Class Hours, 11 Laboratory Hours per semester

PED 103 Back Packing **1 Credit**
Designed to prepare students for a camping experience inaccessible by auto. The art of being self-sufficient with everything on your back. A three-day campout on the trail. Lightness stressed by eliminating all unnecessary items and utilizing lightweight food, shelter, sleeping bag and cooking equipment.
15 Class Hours, 15 Laboratory Hours per semester

PED 106 Badminton **½ Credit**
Instruction and practice in the various strokes. Rules, terminology and equipment. Strategy for singles and doubles.
4 Class Hours, 11 Laboratory Hours per semester

PED 109 Basketball **½ Credit**
Instruction and practice in the fundamental skills of passing, dribbling, shooting and defense. History, rules, tactics, and team play. Basketball as a carry-over sport. (Not offered in 1979-80 academic year).
4 Class Hours, 11 Laboratory Hours per semester

PED 112 Bowling **½ Credit**
Bowling fundamentals including ball selection, grip, stance, approach and delivery. Etiquette, scoring, correction of basic mistakes in delivery. Classes are at off-campus site and students must pay for own games, shoe rental and transportation.
3 Class Hours, 12 Laboratory Hours per semester

PED 115 Circuit Training and Conditioning **½ Credit**
Individualized program on weight machine. Student is pre-tested to determine starting level. Principles of training, components of fitness and proper technique.
3 Class Hours, 12 Laboratory Hours per semester

PED 118 Field Hockey **½ Credit**
Basic skills needed for good competition in game situations. Emphasis on rules and responsibilities of each position on the team. Organized competition within the class. (Not offered in 1979-80 academic year).
4 Class Hours, 11 Laboratory Hours per semester

PED 121 Golf ½ Credit

Skills, rules, etiquette and strategy. Field trips to a driving range and/or par-3 golf course, with students providing their own transportation and fees. Advanced students to play on a regulation course, providing their own transportation, greens fees and clubs.

4 Class Hours, 11 Laboratory Hours per semester

PED 127 Jogging ½ Credit

Jogging as a possible leisure time activity. Physiological and psychological benefits, improvement of technique and basic principles of training. Individual works at own level and sets own goals. Distance usually worked: 2 miles.

3 Class Hours, 12 Laboratory Hours per semester

PED 142 Skiing ½ Credit

Instruction and practice in all phases of skiing (beginning through advanced). Conduct, terminology, safety and equipment. Basic racing technique demonstrated and practiced where sufficient skill level and interest are indicated. Classes at an off-campus site; students must pay necessary fees and provide their own transportation.

3 Class Hours, 12 Laboratory Hours per semester.

PED 143 Ski Touring ½ Credit

Instruction and practice in cross-country skiing — beginning through advanced. Conduct, terminology, safety and equipment. Classes both on and off campus. Skis, poles, bindings provided; students responsible for boots and transportation.

3 Class Hours, 12 Laboratory Hours

PED 145 Slimnastics ½ Credit

Exercises for all muscles of the body. Duration of each exercise and number of exercises used during the class hour gradually increased. Music used for intensive exercise routines.

4 Class Hours, 11 Laboratory Hours per semester

PED 148 Soccer ½ Credit

Instruction and practice in the fundamental skills of kicking, tackling, trapping, dribbling and heading. Rules and tactics. Team competition.

4 Class Hours, 11 Laboratory Hours per semester

PED 154 Speedball ½ Credit

A combination team sport involving skills common to soccer, basketball and football. Development of skills, rules and strategy of the game. Speedball is a fast moving, quick thinking game played with hands and feet.

4 Class Hours, 11 Laboratory Hours per semester

PED 169 Tennis ½ Credit

Instruction and practice in the basic strokes — forehand, backhand, serve and volley. Rules, terminology and equipment. Strategy for singles and doubles.

4 Class Hours, 11 Laboratory Hours per semester

PED 172 Volleyball ½ Credit

A basic course in the fundamentals of power volleyball. Team strategy, history and rules of United States Volleyball Association. Drills and competitive play.

4 Class Hours, 11 Laboratory Hours per semester

PED 175 Weight Training ½ Credit

Individualized work on weight machine. Student selects activities along with instructor's guidance. Emphasis on improvement of weaknesses and a balanced approach. Physical fitness, principles of training. (Not offered in 1979-80 academic year).

3 Class Hours, 12 Laboratory Hours per semester

PED 299 Independent Study ½ or 1 Credit

Student undertakes a project of own choice with guidance from faculty member. The project is intended for a student who has completed requirements.

Prerequisite: 2 Semester Hours in Physical Education

PHYSICAL SCIENCE

PHS 111 Physical Science for Today 3 Credits

Beginnings of astronomy, the earth and moon, planets and satellites, the sun and other stars, cosmology. Chemistry of our atmosphere, weather and methods of modification, water cycle and pollution. Composition of the earth's crust, erosional processes, earthquakes and volcanoes, plate tectonics, nuclear radiation, man and his environment. Required field trips supplement classroom experience.

2 Class Hours, 2 Laboratory Hours

PHS 112* General Physical Science 2 Credits

Beginnings of astronomy, the earth and moon, planets and satellities, the sun and other stars, cosmology. Chemistry of our atmosphere, weather and methods of modification, water cycle and pollution. Composition of the earth's crust, erosional processes, earthquakes and volcanoes, plate tectonics, nuclear radiation, mankind and environment. Required field trips supplement classroom experience.

1 Class Hour, 2 Laboratory Hours

PHS 113 Physical Science — Astronomy 4 Credits

The Copernican and Ptolemaic models of the solar system. The planets, sun, moon and comets. Stellar magnitudes and evolution of stars. The size and age of the universe and modern developments in astronomy and cosmology. Required field trips supplement classroom experience.

3 Class Hours, 3 Laboratory Hours
Prerequisite: MAT 003 Basic Mathematics Review or equivalent

PHS 115 Physical Science — Geology 4 Credits

Crystals, minerals, rocks — their structure and identification. Erosion of the crust, its uplift and deformation. Earthquakes and the interior of the earth, geologic dating and the physical history of the earth. Plate tectonics and continental drift, ecology from a geologic viewpoint. Required field trips supplement classroom experience.

3 Class Hours, 3 Laboratory Hours
Prerequisite: MAT 003 Basic Mathematics Review or equivalent

PHS 116 Physical Science — Environment 4 Credits

Basic physical principles and the role of these principles in understanding and appreciating the problems of the environment. Problems of pollution and depletion of natural resources. Application of physics in the everyday world. Required field trips supplement classroom experience.

3 Class Hours, 3 Laboratory Hours
Prerequisite: MAT 003 Basic Mathematics Review or equivalent

PHYSICS

PHY 100, 101 Preparatory Physics I and II 4, 4 Credits

Composition and resolution of vectors. Statics and dynamics. Conservation laws, wave motion, sound and light. Thermodynamics, electricity and magnetism. The physics of the atom.

4 Class Hours each
Prerequisite: MAT 003 Basic Mathematics Review or equivalent

*TAUGHT EVENINGS ONLY

PHY 117 Physics 3 Credits

Vectors, linear motion, energy, momentum, electric fields, potential difference, Ohm's law, d-c circuits, motion of charges in magnetic fields, electromagnetic induction. Mirrors and lenses, nature of light, atomic structure, production of X-rays, radioactive decay, nuclear reactions, interaction of radiation with matter, radiation detection, radiation protection standards.

2 Class Hours, 2 Laboratory Hours
Prerequisite: MAT 003 Basic Mathematics Review or equivalent

PHY 141 Physics 4 Credits

Composition and resolution of vectors, forces in equilibrium, moments of forces, elasticity, linear and projectile motion, forces and motion, rotation, work and energy, impulse and momentum, harmonic motion, fluid mechanics, temperature, thermal expansion, heat. For Engineering Technology students.

3 Class Hours, 2 Laboratory Hours
Corequisite: MAT 141 College Algebra and Trigonometry or equivalent

PHY 142 Physics 4 Credits

Thermodynamics, thermal properties of gases, wave motion and sound, electrostatics, direct current, magnetism, electromagnetic induction, alternating current, electromagnetic radiation, illumination, reflection and refraction of light, mirrors and lenses, optical instruments, diffraction, nuclear energy. For Engineering Technology students.

3 Class Hours, 2 Laboratory Hours
Prerequisite: PHY 141 Physics

PHY 144 Physics II-E 4 Credits

Thermodynamics, wave motion and sound, photometry, reflection, refraction, dispersion, light, mirrors and lenses, optical instruments, diffraction, lasers, electrostatics, potential, current, resistance, magnetics, semiconductor theory. For Electrical Technology students.

3 Class Hours, 2 Laboratory Hours
Prerequisite: PHY 141 Physics, EET 121 Electrical Circuits

PHY 161 Physics 4 Credits

Structure and language of physics. Standard units of measurement of length, mass and time. Basic mathematical foundation: elementary trigonometry, vector algebra, powers of ten and significant figures. Mechanics: motion, Newton's Laws, work, energy and momentum principles, rotation. Waves and wave phenomena, mirrors and lenses, optical instruments, sound. First course in an introductory non-calculus sequence. For Liberal Arts students who need a laboratory science.

3 Class Hours, 3 Laboratory Hours
Prerequisite: MAT 141 College Algebra and Trigonometry or equivalent

PHY 162 Physics 4 Credits

Concepts of heat and temperature, kinetic theory, thermodynamics. Electricity and magnetism: electrostatics, electrical circuits, electromagnetic phenomena. Modern physics: relativity, quantum theory, atomic structure radioactivity. Second half of introductory physics course for Liberal Arts students who need a laboratory science.

3 Class Hours, 3 Laboratory Hours
Prerequisite: PHY 161 Physics

PHY 181 Engineering Physics I 4 Credits

Vectors, equilibrium, kinematics, Newton's Laws of Motion, centripetal force, work and energy, impulse and momentum, rotation, elasticity, harmonic motion, hydrostatics and hydrodynamics.

3 Class Hours, 2 Laboratory Hours
Corequisite: MAT 163 Calculus with Analytic Geometry I or
MAT 171 Engineering Calculus with Analytic Geometry I

PHY 182 Engineering Physics II 4 Credits

Relativistic mechanics, Coulomb's Law, electrostatic field, potential, capacitance, direct currents, magnetic force on currents, magnetic field of a current, induced emf, inductance, alternating currents.

3 Class Hours, 2 Laboratory Hours
Prerequisite: PHY 181 Engineering Physics I
Corequisite: MAT 164 Calculus with Analytic Geometry II or
MAT 172 Engineering Calculus with Analytic Geometry II

PHY 281 Engineering Physics III 3 Credits

Wave motion, sound, temperature, calorimetry, heat transfer, elementary thermodynamics, kinetic theory, geometrical optics, optical parts and instrumentation, physical optics, interferometry and polarization.

3 Class Hours
Prerequisites: 1 year of calculus and PHY 181 Engineering Physics I or equivalent

PHY 282 Engineering Physics IV 3 Credits

Quantum description of waves and particles, Bohr's model of atomic structure, Schroedinger's equation, X-rays, quantization of angular momenta, atomic spectra, introduction of solid state physics, nuclear radiation detection instruments, nuclear force, binding energy of stable nuclei, radioactive decay, low energy nuclear reactions, neutrons, fission, fusion.

3 Class Hours
Prerequisites: 1 year of calculus and PHY 182 Engineering Physics II

POLITICAL SCIENCE

POS 201 Introduction to American Government 3 Credits

American political institutions, processes and behavior. The relationships among cultural, legal and social aspects of the political system. Structure, organization and function of political parties, pressure groups and mass media. Application to contemporary issues and events.

3 Class Hours

POS 203 International Relations 3 Credits

Basic concepts and principles of world politics. International conflict resolution, international organizations, the struggle for power. Factors affecting the relationships among the major powers. Role of diplomacy, alliances, war and peace in the world arena. (Not offered in 1979–80 academic year).

3 Class Hours

POS 204 American State and Local Government 3 Credits

Theory and practice of state and local government, utilizing a problem-solving or "policy" approach. Students are encouraged to explore in depth the workings of city and county governments locally.

3 Class Hours

POS 299 Independent Study 1–3 Credits

An independent student project which is beyond the scope of courses currently offered by the department, directed by a faculty member with approval of the department chairperson.

Prerequisite: 3 semester hours of political science

PSYCHOLOGY

PSY 100 Psychology of Personal Adjustment **3 Credits**

Investigation of bio-cultural factors which influence human behavior and study of the development of well-adjusted personality. Attention is directed to the learning and thinking the individual employs in solving personal problems in everyday living. (This course cannot be used as a prerequisite for other psychology courses.)
3 Class Hours

PSY 103 Psychology of Adulthood **3 Credits**

Investigation of the continuity-change pattern that characterizes normal adulthood (20 to 60 years). Identification of individual responses to life crises. Introduction to skills that facilitate meeting self-selected goals and skills that assist others to fulfill their goals.
3 Class Hours

PSY 110 General Psychology **3 Credits**

Definition and description of psychology. Functions of the neural system, sensation and perception, learning, memory, motivation, emotion, conflict and frustration, personality, social psychology. Methods and statistical applications, history and fields of psychology.
3 Class Hours

PSY 211 Child Development **3 Credits**

The growth, maturation and development of children, including mental and motor phases, learning, motivation and personality formation.
3 Class Hours
Prerequisite: PSY 110 General Psychology

PSY 212 Adolescent Development **3 Credits**

The adjustment processes necessary for the child to become an adult. Development of socialization, personal goals and enlargement of self-concept. Formative influences of social institutions and environmental elements relative to the growth of the individual.
3 Class Hours
Prerequisite: PSY 110 General Psychology

PSY 214 Abnormal Psychology **3 Credits**

Description and criteria for normal and abnormal personality. Dynamic processes of adjustment, the coping process. Definition and description of sociopathic, psychopathic, neurotic and psychotic behavior. Development of both functional and organic disorders.
3 Class Hours
Prerequisite: PSY 110 General Psychology

PSY 217 Counseling and Interviewing **3 Credits**

Varied methods of interviewing and counseling, group dynamics employing current theories, situational examples and means for determination of method to be used. Practical cases in social services, clinics, hospitals and educational institutions. Overall training and personality of the counselor.
3 Class Hours
Prerequisite: PSY 110 General Psychology

PSY 223 Intelligence and the Mentally Retarded **3 Credits**

The several meanings of the concept of intelligence, distribution of intelligence in populations, development and organization of intelligence at different levels, concepts of retardation. The various levels and causations of retardation, development at all chronological ages, learning and employment expectations, methods of assisting with behavioral improvement, cooperative social agencies.
3 Class Hours
Prerequisite: PSY 110 General Psychology

PSY 227 Behavior Modification **3 Credits**

Principles of behavior modification using classical and operant techniques. Practical applications of these principles to the fields of child care, psychotherapy and correctional institutions.
3 Class Hours
Prerequisite: PSY 110 General Psychology

PSY 299 Independent Study **1–3 Credits**

An individual student project in psychology which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.
Prerequisite: PSY 110 General Psychology plus 3 additional hours in a 200 level PSY course

RADIOLOGIC TECHNOLOGY

RAD 100 Introduction to Radiologic Technology **1 Credit**

Introduction and orientation to the radiologic technology profession. The professional conduct of the radiologic technologist. (Half Semester.)
2 Class Hours

RAD 101 Radiologic Technology I **3 Credits**

Individual modules including radiation protection, recording media, film processing, radiographic quality, and radiographic accessories.
3 Class Hours, 1 Laboratory Hour

RAD 102 Radiologic Technology II **3 Credits**

A modular approach to radiological mathematics, advanced study of radiographic quality, preparation of technique charts, sensitometry, and portable radiography.
3 Class Hours
Prerequisite: RAD 101 Radiologic Technology I or permission of Instructor

RAD 110 Methods of Patient Care **2 Credits**

The professional conduct of the radiologic technologist and related patient care procedures routinely used in the department of radiology. Understanding of the basic procedures utilizing contrast media. Identifying basic medical terminology with emphasis on radiographic consultations.
1 Class Hour, 2 Laboratory Hours

RAD 130 Directed Practice **3 Credits**

Instruction and practice in radiographic positioning of the appendicular skeleton, chest and abdomen, with related practical application in an affiliated hospital.(Half Semester).
19 Laboratory Hours

RAD 131 Extended Campus Laboratory (Winterim)

Winterim clinical assignment devoted to observation and application of elementary radiographic procedures under direct supervision in a cooperating hospital. (Graduation Requirement.)
Total of 80 Laboratory Hours
Prerequisites: RAD 130 Directed Practice, BIO 131 Human Biology I and RAD 110 Methods of Patient Care

RAD 132 Directed Practice **4 Credits**

Instruction and practice in radiographic positioning of the axial skeleton, with related practical application in an affiliated hospital.
19 Laboratory Hours
Prerequisite: RAD 131 Extended Campus Laboratory

RAD 133 Summer Extended Campus Laboratory

Summer practice in radiographic positioning and technique at an assigned hospital to qualify for State Licensing and American Registry Examinations. A graduation requirement.
Prerequisites: RAD 132 Directed Practice and
BIO 132 Human Biology II

RAD 210 Radiologic Physics **4 Credits**

Principles of the construction and function of radiographic equipment; troubleshooting and preventive maintenance.
4 Class Hours
Prerequisite: PHY 116 Physics or permission of instructor

RAD 215 Nuclear Medicine and Radiation Therapy **1 Credit**

Basic concepts and principles related to the use of radiopharmaceuticals and therapeutic radiation in medicine.
1 Class Hour
Prerequisite: RAD 210 Radiologic Physics or permission of instructor

RAD 220 Radiological Pathology **2 Credits**

Medical and surgical diseases and their relationship to radiographic procedures.
2 Class Hours
Prerequisite: BIO 132 Human Biology II

RAD 225 Special Radiographic Procedures **4 Credits**

Introduction to radiographic examinations involving surgical procedures and specialized equipment.
3 Class Hours, 2 Laboratory Hours
Prerequisites: RAD 230 Directed Practice and BIO 132 Human
Biology II or permission of instructor

RAD 230 Directed Practice **4 Credits**

Instruction and practice in advanced positioning techniques of the skull and facial bones, including intraoral radiography with related practical application in an affiliated hospital.
19 Laboratory Hours
Prerequisite: RAD 133 Summer Extended Campus Laboratory
or permission of instructor

RAD 231 Extended Campus Laboratory (Winterim)

Winterim clinical assignment devoted to the application of radiographic procedures under direct supervision in a cooperating hospital. A graduation requirement.
Prerequisite: RAD 230 Directed Practice or
permission of instructor

RAD 232 Directed Practice **3 Credits**

Application of advanced radiographic procedures under direct supervision in an affiliated hospital.
16 Laboratory Hours
Prerequisite: RAD 231 Extended Campus Laboratory

RAD 233 Summer Extended Campus Laboratory

Summer practice in advanced radiographic positioning and technique at an assigned hospital to qualify for State Licensing and American Registry Examinations. A graduation requirement.
Prerequisite: RAD 232 Directed Practice or permission of instructor

RAD 240 Radiation Health **2 Credits**

Biomedical aspects of the effects of ionizing radiation together with general and specialized techniques used for protection of patients and personnel. Federal and state regulations and guidelines for radiation installations.
2 Class Hours, 1 Laboratory Hour
Prerequisite: RAD 210 Radiologic Physics or
permission of instructor

RAD 295 Seminar in Radiography **2 Credits**

Preparation of the technical report and its organization for both written and oral presentation. Readings in current literature and journals.
2 Class Hours
Prerequisite: Senior Year Status

READING AND STUDY SKILLS

RDG 010 College Reading **3 Credits***

Individual diagnosis of a student's reading strengths and weaknesses, development and implementation of a program geared to upgrade skills necessary for success in college courses. Course length and content will vary with individual student.
3 Class Hours
***These credits do not fulfill degree requirements.**

RDG 110 Rapid Reading **1 Credit**

Development of skills characteristic of the mature reader. Examination of structure of material, emphasis on identification of purpose, flexibility of rate. Use of controlled readers, reading accelerators.
2 Class Hours

RDG 120 Speed Reading **1 Credit**

Theories of speed reading coupled with extensive practice in developing a greater range in effective reading rate. Emphasis on adjusting rate and comprehension to the type and level of material.
1 Class Hour, 1-3 Laboratory Hours

The following courses are limited-credit activities for students wishing to enhance various study skills:

LRS 101 Learning Skills: Time Scheduling and Concentration **½ Credit**

General principles of academic success, relationship of outside work and study, scheduling and organizing time, study and concentration. Students will construct a working study schedule.
3 Class Hours, 3 Weeks

LRS 102 Memory and Exams **½ Credit**

Theories of memory. Methods of review, strategies for taking essay and objective examinations.
3 Class Hours, 3 Weeks

LRS 103 Learning Skills: Textbook Mastery ½ Credit

Use of college textbooks as study aids, principles of effective text reading, text study systems. Extensive application of these principles in the student's own textbook.
3 Class Hours, 3 Weeks

LRS 104 Listening and Notetaking ½ Credit

Examination of organizational patterns as they exist in oral communication. Exploration of systems on note-taking, and application of systems to student's own lectures and notes.
3 Class Hours, 3 Weeks

RESPIRATORY COURSE

RES 120* Intensive Care Unit 3 Credits

Recognition, medical management and prevention of acute respiratory diseases. Anatomy of the respiratory system including blood gas analysis, care of the airway and mechanical ventilation. Some previous medical terminology desired.
3 Class Hours

SECRETARIAL SCIENCES

SEC 100 Typewriting 1 Credit

Introduction to typewriting and machine parts. Develop speed, accuracy in typing exact copy for 3 minutes. For students who want a basic knowledge of the keyboard.
2 Class Hours, 2 Laboratory Hours, 5-Week Course

SEC 101 Typewriting 3 Credits

Beginning sequence in touch typewriting to make the operator accurate, rhythmical and rapid in the operation of the typewriter. Presentation of keyboard typing of centering problems, memorandums, postal cards, personal and business letters, outlines, manuscripts. Development of proficiency of techniques of typing business letters, tabulations, reports, miscellaneous business forms. Building of typewriting speed and accuracy.
2 Class Hours, 3 Laboratory Hours

SEC 102 Typewriting 3 Credits

Continuation of basic skill building with emphasis on speed and accuracy in typing business letters, manuscripts, memorandums, tables, various business forms, financial statements, data sheets, employment applications.
2 Class Hours, 3 Laboratory Hours
Prerequisite: SEC 101 Typewriting or equivalent

SEC 103 AVT Typewriting 3 Credits

Development of the basic techniques of typewriter operation by an audio-visual-tutorial system (AVT) of instruction which permits the student to proceed at own pace. Slide-tape presentations include keyboard mastery, machine operation, horizontal and vertical centering, business applications such as letters, manuscripts, outlines, tabulations, forms. Building of typewriting speed and accuracy.

SEC 104 AVT Typewriting 3 Credits

Continuation of basic skill building with emphasis on speed and accuracy in typing advanced materials by an audio-visual-tutorial system (AVT) of instruction which permits the student to proceed at own pace. Slide-tape presentations include letter styles and notations, manuscripts, advanced tabulation, alignment, applications, data sheets, memorandums, business statements and forms.
Prerequisite: SEC 103 AVT Typewriting or
SEC 101 Typewriting or equivalent

SEC 105* Introductory Typewriting 2 Credits

Touch typewriting. Presentation of keyboard, typing of centering problems, memorandums, postal cards, personal and business letters, outlines, manuscripts. Emphasis on speed and accuracy.
2 Class Hours, 2 Laboratory Hours

SEC 106* Intermediate Typewriting 2 Credits

Continued speed and accuracy emphasis. Typing of business letters, manuscripts, memorandums, tables, various business forms, financial statements, data sheets, employment applications.
2 Class Hours, 2 Laboratory Hours
Prerequisite: SEC 105 Introductory Typewriting or equivalent

SEC 110 Shorthand 3 Credits

Beginning course in Gregg Shorthand, Diamond Jubilee System. Basic principles to promote the ability to read fluently from plates and notes. Longhand and typewritten transcription from shorthand notes dictated from unfamiliar material at minimum rate of 60 words a minute.
2 Class Hours, 3 Laboratory Hours
Prerequisite: SEC 101 Typewriting or equivalent or
concurrent enrollment in SEC 101 Typewriting

SEC 111 Shorthand and Transcription 4 Credits

Development of a minimum rate of 70 words per minute shorthand speed, dictated from unfamiliar material, with efficient transcription techniques to produce typewritten mailable transcripts. Emphasis on shorthand speed building while integrating the correct usage of principles of grammar, spelling, punctuation, capitalization, vocabulary, numbers, word division, words often confused.
2 Class Hours, 5 Laboratory Hours
Prerequisites: SEC 110 Shorthand or equivalent and
SEC 101 Typewriting or equivalent

SEC 151 Business Communications 3 Credits

Development of desirable written communication style. Review of basic writing mechanics. Composition of letters of inquiry and reply, claim and adjustment, credit and collection, sales and promotion, application. Memorandums, news releases, short reports, telegrams.
3 Class Hours
Prerequisite: SEC 101 Typewriting or equivalent

SEC 153 Office Communications 3 Credits

Practice in written and oral communication. Review of grammar and basic mechanics of effective writing.
3 Class Hours
Prerequisites: SEC 101 Typewriting or equivalent and
ENG 100 Basic Language Skills

SEC 210 Executive Typewriting 3 Credits

Training in advanced typing techniques and magnetic keyboard equipment. Emphasis on preparing documents for law, insurance, real estate, investment, education. Continuation of typewriting speed building.
2 Class Hours, 2 Laboratory Hours
Prerequisite: SEC 102 Typewriting
and SEC 240 Office Practice

*TAUGHT EVENINGS ONLY

SEC 212 Technical Typewriting 3 Credits

Training in understanding the correct procedures in preparing typewritten technical materials and magnetic keyboard equipment. Emphasis on typing equations, formulas, laboratory reports. Continuation of typewriting speed building.

2 Class Hours, 2 Laboratory Hours
Prerequisite: SEC 102 Typewriting and SEC 240 Office Practice

SEC 230 Advanced Shorthand 3 Credits

Development of shorthand speed with the introduction of special short cuts to increase efficiency. Transcription at the typewriter from notes dictated from unfamiliar material at minimum rate of 80 words per minute. Development of proficiency in production of mailable typewritten transcripts from the student's shorthand notes.

2 Class Hours, 3 Laboratory Hours
Prerequisites: SEC 111 Shorthand and Transcription and
SEC 102 Typewriting

SEC 232 Specialized Dictation: Executive 3 Credits

Emphasis on increasing shorthand speeds and improving production of mailable typewritten transcripts through an increased knowledge of basic information and vocabulary from the specialized areas of investment, law, insurance.

2 Class Hours, 3 Laboratory Hours
Prerequisites: SEC 230 Advanced Shorthand and
SEC 102 Typewriting

SEC 234 Specialized Dictation: Engineering 3 Credits

Emphasis on increasing shorthand speeds and improving production of mailable typewritten transcripts through an increased knowledge of basic information and vocabulary from the specialized areas of aerospace, life sciences, synthetics, hydrocarbons-petrochemicals, electronics, communications, computer, nucleonics.

2 Class Hours, 3 Laboratory Hours
Prerequisite: SEC 230 Advanced Shorthand and
SEC 102 Typewriting

SEC 240 Office Practice 2 Credits

Advanced typing material on selected topics using various typewriters. Practical experience in operation of calculating, duplicating, transcribing machines, and magnetic keyboard equipment. Training in telephone procedures on the college switchboard.

4 Laboratory Hours
Prerequisites: SEC 111 Shorthand and Transcription
and SEC 102 Typewriting

SEC 242 Secretarial Procedures 3 Credits

Final preparation for a secretarial career including the steps of the job interview process. Business activities related to the secretarial profession — word processing, postal and shipping services, telephone procedures, travel arrangements, planning meetings, banking services, application of filing procedures.

3 Class Hours, 1 Laboratory Hour
Prerequisite: SEC 230 Advanced Shorthand
and SEC 240 Office Practice

SEC 244 Office Practice/Procedures 3 Credits

Final preparation for an office career. Business activities related to the office services environment — word processing, postal and shipping services, telephone procedures, travel arrangements, planning meetings, banking services, application of filing procedures.

2 Class Hours, 3 Laboratory Hours
Prerequisites: SEC 102 Typewriting
and SEC 151 Business Communications

SEC 246 Office Machines 3 Credits

Practical experience in the operation of various typewriters including magnetic keyboard equipment, calculators, mimeo and spirit duplicators, transcribing and dictating equipment.

5 Laboratory Hours
Prerequisite: SEC 102 Typewriting or concurrent enrollment

SEC 248 Office Procedures 3 Credits

Analysis of the basic tasks performed by the office employee. How to apply for and secure the office position. Filing systems and procedures, telephone and telegram services, postal information, office supplies and equipment.

3 Class Hours
Prerequisite: SEC 102 Typewriting or concurrent enrollment

SEC 260 Directed Secretarial Experience — Model Office 2 Credits

Secretarial students are required to work at least four hours weekly in the model office to gain practical working knowledge by producing various types of campus communications.

4 Laboratory Hours
Prerequisite: For Executive and Engineering Secretarial students —
SEC 102 Typewriting and SEC 111 Shorthand and Transcription.
For Office Services Assistant students — SEC 102 Typewriting and
SEC 151 Business Communications

SEC 261 Extended Secretarial Experience — Model Office 2 Credits

Continuation of SEC 260 Directed Secretarial Experience — Model Office, with emphasis on advanced word processing training and professional development. Students are required to assume more demanding and sophisticated responsibilities than in SEC 260.

4 Laboratory Hours
Prerequisites: SEC 260 Directed Secretarial Experience — Model Office and
approval of the Model Office coordinator and department chairperson

SEC 264 Machine Transcription 3 Credits

Emphasis on increasing skill in transcribing recorded materials. Continuing development of knowledge of business vocabulary, correct usage of principles of grammar, punctuation, spelling in the machine transcription of business documents.

2 Class Hours, 2 Laboratory Hours
Prerequisites: SEC 101 Typewriting or equivalent

SEC 299 Independent Study 1-4 Credits

Advanced investigation or research in an individual student's major field of study. Under the guidance of a faculty member, the independent study concerns material beyond the scope and depth of the ordinary course offering. Only one independent study course is allowed per semester.

Prerequisite: Approval of faculty member and department chairperson

SIGN LANGUAGE

HUS 120* Sign Language 3 Credits

Introduction to total communication as a means of conversing with the deaf. Amesian (American Sign Language), fingerspelling, numbers, idioms, non-verbal communication, singing songs, poems, stories, psychology of the deaf.

3 Class Hours

HUS 220* Intermediate Sign English **3 Credits**
Intermediate Sign English (Ameslish) is straight English syntax using Amesian based on conceptual signs in English syntax.
3 Class Hours
Prerequisite: HUS 120 Sign Language or permission of Instructor

SOCIAL SCIENCE (INTERDISCIPLINARY)

SOS 100 Urban Society **3 Credits**
Conditions, trends and problems of contemporary urban American society. Efforts and proposals for making the cities, suburbs and exurbs better places to live and work in during a time of increasing population and increasing population concentration. A look at such urban systems as education, housing, transportation, criminal justice, business. Consideration of the "Rural Renaissance." Brief focusing upon the current roles of religion, the media, recreation. (Not offered in 1979–80 academic year).
3 Class Hours

SOS 120 Science and Civilization **3 Credits**
A survey of the interplay between science/technology and Western Civilization from earliest times to the present (major emphasis on the industrial and post-industrial periods). Role of culture in determining scientific/technological advances, interplay between war and scientific/technological advances, necessary conditions for an industrial revolution (scientific/technological), impact of science/technology on a post-industrial society.
3 Class Hours

SOS 130 Man, Technology and Environment **3 Credits**
Biological, economic and political dimensions of the environmental crisis. The conditions created by population growth, a rising standard of living, the increased demand on natural resources, and the advance of technology. Alternative strategies to deal with pollution and energy problems.
3 Class Hours

SOS 145 Psychology of Sex Roles **3 Credits**
Biological, social and psychological determinants of maleness and femaleness. Physical, economic, political, Biblical and psychological causes of sexism (male superiority). Relationship to cultural evolution.
3 Class Hours

SOS 146 Aging: An Overview **3 Credits**
Multidisciplinary analysis of the bio-psycho-social characteristics of older persons. Examination of major issues and dynamics involved in the process of growing old.
3 Class Hours
Prerequisite: PSY 110 General Psychology or permission of Instructor

SPECIAL TOPICS IN SOCIAL SCIENCE
(SOS 150–250)

Courses in this sequence will sometimes be off-campus offerings developed for special audiences, such as TV and newspaper courses.

SOS 160–169 Case Studies in Ethnicity **1 Credit**
A sociological analysis of the origins and experiences, the cultural patterns and social relationships of Americans from various ethnic backgrounds.

SOS 160 The Italian American **1 Credit**
Deals with Italian Americans as an initial attempt to focus attention on ethnic groups and their persistent impact.
1 Class Hour

SOS 290 Social Science Field Experience **3 Credits**
Introduction to the practical issues of the "helping relationship" and an understanding of agency operations. Each student to spend a minimum of 90 hours working in community social and educational agencies. Weekly seminars, outside reading and written reports are required. During the seminars specific helping techniques such as facilitating, goal-setting, reinforcing and supporting will be analyzed.
1 Class Hour
Prerequisite: 3 Credit hours in psychology or sociology
plus completion of or concurrent enrollment
in 3 additional credit hours in either of these areas

SOCIOLOGY

SOC 110 Introduction to Sociology **3 Credits**
Sociological facts and principles dealing with the scientific study of human relationships. Emphasis on analysis and study of culture and human society, socialization, groups and group structures. Stratification, collective behavioral patterns and the concept of social institutions. Initial experiences for students who desire an introduction to the sociological perspective.
3 Class Hours

SOC 111 Social Problems **3 Credits**
The sociology of social and urban problems. Topics may include crime, population, inequality, discrimination, mental illness, attitudes toward work, social control and the dynamics of social change. Students should be aware that individual instructors approach these problems in different ways, depending on students' needs and instructors' interests. SOC 110 Introduction to Sociology is recommended as an initial experience.
3 Class Hours

SOC 210 Crime and Deviant Behavior **3 Credits**
The theoretical aspects of deviance as crime, variations in crime rates, the social and psychological causes of crime, other deviant behavior and the salient research discoveries in these areas. Specific areas within criminology such as homicide and suicide from a multidisciplinary approach to permit as broad an understanding of the problem as possible.
3 Class Hours
Prerequisite: SOC 110 Introduction to Sociology

SOC 220 Minority Groups **3 Credits**
Various minority-majority (racial and ethnic) situations confronting contemporary America. Special focus on the sociological ramifications of these situations. Social movements and conflicts. (Not offered in 1979–80 academic year). **3 Class Hours**
Prerequisite: SOC 110 Introduction to Sociology

SOC 230 Marriage, Family and Divorce **3 Credits**
Social and personal factors which make for adequate family functioning, the forms the family takes, its internal processes and the functions it serves in society. Covers systematically the important theoretical and experimental ground on those issues relevant to both the scholarly and practice-minded student. **3 Class Hours**
Prerequisite: SOC 110 Introduction to Sociology

*TAUGHT EVENINGS ONLY

SOC 299 Independent Study **1-3 Credits**
An individual student project in sociology which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.
Prerequisite: 3 semester hours in sociology

SPANISH

SPA 101, 102 Beginning Spanish 4, 4 Credits
Basic principles of grammar and syntax. Emphasis on oral practice in classroom, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts. **4 Class Hours, 1 Laboratory Hour each**
Prerequisite: SPA 101 Beginning Spanish for SPA 102

SPA 201 Intermediate Spanish I 3 Credits
Intensive review and continuation of grammar and syntax. Intensive and extensive reading of literary works of recognized authors. Aural comprehension and oral practice in the classroom and audio-lingual laboratory. **3 Class Hours, 1 Laboratory Hour**
Prerequisite: SPA 102 Beginning Spanish

SPA 202 Intermediate Spanish II 3 Credits
Intensive and extensive reading of literary works of recognized authors. Classroom discussion and conversation based on these texts, in the language.
3 Class Hours, 1 Laboratory Hour
Prerequisite: SPA 201 Intermediate Spanish I

SPA 203, 204 The Spanish Language Through Its Literature 3, 3 Credits
Practice in and emphasis on conversation and composition in Spanish, based on the reading of various literary masterpieces from centuries past to the present. (Not offered in 1979-80 academic year). **3 Class Hours each**
Prerequisites: SPA 202 Intermediate Spanish II for SPA 203
SPA 203 The Spanish Language Through Its Literature for SPA 204

SPA 205 Spanish Conversation and Composition I 3 Credits
The art of conversation and writing in Spanish practiced from basic proficiency to that of a more advanced level. Topics of conversation of common, daily interest subjects. Writing of short paragraphs and letters. (Not offered in 1979-80 academic year).
3 Class Hours
Prerequisite: SPA 202 Intermediate Spanish II or equivalent

SPA 299 Independent Study: Spanish 1-3 Credits
An individual student project concerned with advanced work in a specific area of Spanish. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in Spanish

SPEECH

SPK 100 Basic Speaking 2 Credits
Speech communication through voice, words and action. Voice production, diction, platform presence. Organization of ideas. Practice in presenting speeches of different types. Not for Liberal Arts students. **2 Class Hours**

SPK 102 Effective Speaking 3 Credits
Speech communication through voice, words and action. Voice production, diction, platform presence. Organization of ideas. Practice in presenting speeches of different types. **3 Class Hours**

SPK 299 Independent Study: Speech 1-3 Credits
An individual student project concerned with advanced work in a specific area of speech. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in speech

THEATER

THR 101 Fine Arts: Introduction to Theater 3 Credits
Art of the theater to increase understanding and appreciation of drama. A cultural approach considering the interrelationship of all apsects of production including plays, acting, directing, costume, make-up and lighting. Attendance at local productions. (Students taking this course may also be interested in LIT 230 American Drama, LIT 233 World Drama.) **3 Class Hours**

THR 109, 110 Practicum in Theater Design and Technology 3, 3 Credits
Stage design (both lighting and scenic) and construction techniques are studied first hand, as students participate in actual production of two plays each semester. Problems encountered during a production are analyzed. Individualized instruction is increased as students begin to focus on their particular areas of interest.
3 Class Hours each

THR 111 Acting 3 Credits
Fundamental acting techniques. Development of individual skills and disciplines relative to external acting techniques. Use of face, voice and movement.
3 Class Hours

THR 112 Acting 3 Credits
Intensive application of acting techniques through scene study and performance. Problems of character analysis, internal acting and style. **3 Class Hours**

THR 190 Broome Community College Theater 1 Credit
Students who participate in the plays and performances of the BCC Theater Co. receive one credit per semester. See page 24.

THR 201, 202 Children's Theater 3, 3 Credits
Design and construction of costumes, sets and properties for touring children's production. Study and analysis of children-oriented plays. Performance at community elementary schools and organizations. **3 Class Hours each**

THR 221 History of the Theater 3 Credits
History of stage production with emphasis on theater as a performing art. Chronological examination of theater activity as a mirror of social and cultural experience from primitive times through the Renaissance. **3 Class Hours**

THR 222 History of the Theater 3 Credits
History of stage production from the 18th Century to the present, with attention to the contribution of literature and the fine arts to stage development. **3 Class Hours**

THR 299 Independent Study: Theater 1-3 Credits
An individual student project concerned with advanced work in a specific area of theater. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in theater

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STATE UNIVERSITY OF NEW YORK

CLIFTON R. WHARTON, JR., Chancellor

Broome Community College is one of the 64 colleges that comprise the State University of New York (SUNY), which was established by the State Legislature in 1948. The 64 units include 30 locally-sponsored two-year community colleges like Broome.

The University's 64 geographically dispersed campuses bring educational opportunities within commuting distance of virtually all New York citizens. In academic 1978–79, nearly 350,000 students enrolled in its classrooms or pursued study at home, at their own pace, through such innovative institutions as Empire State College, a campus without walls. Of the 350,000, about 30 percent are 24 years of age or older.

The University is uniquely organized into a system comprised of:

Four University centers, two medical centers, 12 colleges of arts and sciences, a non-residential college, seven specialized colleges, six agricultural and technical colleges, and 30 locally-sponsored community colleges.

In addition to baccalaureate studies, 12 of the senior campuses offer graduate study at the doctoral level, and 22 at the master's level.

The two-year colleges offer associate degree opportunities in a wide range of technical areas. They also provide transfer programs for students wishing to continue to the baccalaureate degree. In the 1978–79 college year, the community colleges enrolled more than 160,000 students. This number is about equally divided into full-time and part-time categories. Ten Educational Opportunity Centers serve the educationally deprived by upgrading occupational skills for more gainful employment and identifying students with college potential to prepare them for enrollment in the state's public and private colleges.

State University is governed by a Board of Trustees, appointed by the Governor, which determines the policies to be followed by the 34 State-supported campuses. The 30 community colleges operating under the program of State University have their own local boards of trustees. SUNY's new motto is "To Learn-To Search-To Serve," which emphasizes The University's three-fold mission of education, research and public service.

During its brief history, State University has graduated more than 650,000 alumni, the majority of whom are pursuing their careers in communities across the state.

CAMPUSES

UNIVERSITY CENTERS

State University at Albany
State University at Binghamton
State University at Buffalo
State University at Stony Brook

COLLEGES OF ARTS AND SCIENCE

College at Brockport
College at Buffalo
College at Cortland
Empire State College
College at Fredonia
College at Geneseo
College at New Paltz
College at Old Westbury
College at Oneonta
College at Oswego
College at Plattsburgh
College at Potsdam
College at Purchase

COLLEGES AND CENTERS FOR THE HEALTH SCIENCES

Health Sciences Center at Buffalo University Center
Health Sciences Center at Stony Brook University Center
Downstate Medical Center at Brooklyn
Upstate Medical Center at Syracuse
College of Optometry at New York City
*College of Veterinary Medicine at Cornell University

AGRICULTURAL AND TECHNICAL COLLEGES

College at Alfred
College at Canton
College at Cobleskill
College at Delhi
College at Farmingdale
College at Morrisville

COMMUNITY COLLEGES

(Locally-sponsored, two-year colleges under the program of State University)

Adirondack Community College at Glens Falls
Broome Community College at Binghamton
Cayuga County Community College at Auburn
Clinton Community College at Plattsburgh
Columbia-Greene Community College at Hudson
Community College of the Finger Lakes at Canandaigua
Corning Community College at Corning
Dutchess Community College at Poughkeepsie
Erie Community College at Buffalo
†Fashion Institute of Technology at New York City
Fulton-Montgomery Community College at Johnstown
Genesee Community College at Batavia
Herkimer County Community College at Herkimer
Hudson Valley Community College at Troy
Jamestown Community College at Jamestown
Jefferson Community College at Watertown
Mohawk Valley Community College at Utica
Monroe Community College at Rochester
Nassau Community College at Garden City
Niagara County Community College at Sanborn
North Country Community College at Saranac Lake
Onondaga Community College at Syracuse
Orange County Community College at Middletown
Rockland Community College at Suffern
Schenectady County Community College at Schenectady
Suffolk County Community College at Selden
Sullivan County Community College at South Fallsburg
Tompkins Cortland Community College at Dryden
Ulster County Community College at Stone Ridge
Westchester Community College at Valhalla

SPECIALIZED COLLEGES

*College of Agriculture and Life Sciences at Cornell University
*College of Ceramics at Alfred University
College of Environmental Science and Forestry at Syracuse
*College of Human Ecology at Cornell University
College of Technology at Utica/Rome
†Fashion Institute of Technology at New York City
Maritime College at Fort Schuyler
*School of Industrial and Labor Relations at Cornell University

*These operate as "contract colleges" on the campuses of private universities

†While offering a limited number of baccalaureate degree programs, in addition to the associate degree, FIT is financed and administered in the manner provided for community colleges.

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X-Ray Technology (See Radiologic Technology)

COLLEGE CALENDAR FOR 1979-80

FALL SEMESTER 1979

August 27-31	Registration
September 3	Labor Day — No Classes
September 4	Classes Begin
*September 10	Last Day for 100% Tuition/Fee Refund
*September 17	Last Day for 50% Tuition/Fee Refund
*September 24	Last Day for 25% Tuition/Fee Refund
October 19	Mid-term Grades Due
November 21-25	Thanksgiving Recess
December 17	Monday Class Schedule
December 18	Wednesday Class Schedule
December 19	Thursday Class Schedule
December 20	Friday Class Schedule
December 21-22	Examination Period
December 27	Grades Due

SPRING SEMESTER 1980

January 14-18	Registration
January 21	Classes Begin
*January 26	Last Day for 100% Tuition/Fee Refund
*February 2	Last Day for 50% Tuition/Fee Refund
*February 9	Last Day for 25% Tuition/Fee Refund
March 7	Mid-term Grades Due
April 7-11	Spring Break
April 14	Classes Resume
May 9	Last Day of Classes
May 12-13	Examination Period
May 19	Grades Due
May 23	Graduation

*Students in classes that meet only on Saturdays will have until 12 noon on the next school day to notify the College of withdrawal and still qualify for tuition/fee refund.

New Grading Policy and Tuition Charges, Effective Fall 1979

GRADING INFORMATION

The following new grading policy goes into effect for the Fall Semester of 1979. Grades earned by students at the College prior to September of 1979 will remain as recorded.

Grades	Honor Points Per Credit Hour	Explanation
A	4	Outstanding achievment of course objectives
B	3	Significant achievement
C	2	Satisfactory achievement
D	1	Minimal satisfactory achievement
F	0	Failure to meet course objectives or dropped after 10th week
S	—	Satisfactory— (For certain
U	—	Unsatisfactory— courses only)
W	—	Withdrawal from a course between the 4th and 10th weeks inclusive (See "W" Grade below)
I	—	Incomplete due to special circumstances (See "I" Grade below)
IP	—	"In Progress"—for courses in which student is permitted more than one semester to complete
AU	—	Audit—not to be recorded as a grade (See "Audit" below)
T	—	Transfer credit from an accredited college

"S", "U" and "IP" Grades

The S or U grade and IP grade will apply only to specific courses determined by the appropriate departments and approved by the Vice-President for Academic Affairs. Such courses will not affect the Grade Point Average (GPA).

"W" Grade

It is the student's responsibility to initiate action to receive a grade of W between the 4th and 10th weeks inclusive. If no action is taken before the 11th week and the course is dropped, an F (or U) will be entered on the transcript. For 7½ week courses, an F (or U) will be entered on the transcript if the course is dropped after the 5th week. For 5-week courses an F (or U) will be entered on the transcript if the course is dropped after the 3rd week.

"I" Grade

A student who receives an I grade shall, within two weeks after the last class of that semester, contact his or her instructor to arrange for completion of unfinished work, in accordance with agreed upon time limits that are not to exceed one year. The instructor will then notify the registrar of the arrangements and, after the student has completed the work, of the subsequent grade to be assigned. If the student does not meet the time limit, the instructor shall direct the registrar to record the appropriate grade.

If the student does not contact the instructor during the two-week period at the end of the semester, the registrar shall record the appropriate grade as directed by the instructor.

Audit

The term "Audit" shall not be considered a grade but an "opportunity." For persons auditing a course, the letters AU will appear next to the course name on the transcript with a message statement explaining the meaning of the designation. No grade shall appear in the grade column on the transcript.

Students are encouraged to use the option of taking courses on an audit basis. Any student who completes a course by auditing will have AU recorded on his/her record in place of credit grades. He/she may not receive credit for it later, unless he/she re-registers in the course or challenges it according to the existing rules for credit-by-examination.

Students who register in a course for audit are expected to have the necessary prerequisites. In this respect students are encouraged to make full use of the College's counseling services, but the ultimate decision whether or not to enroll for audit shall be the student's responsibility. Consideration may be given to a student's request for transfer from credit to audit status or vice-versa. The end of the third week of classes is the deadline for such transfer.

Full-time students may audit courses with no additional charge, but they need approval of their department chairperson. **For part-time students,** the regular tuition schedule applies ($29 per credit hour for New York Sate residents and $58 per credit hour for out-of-state students). New York State residents who are **60 years of age or older** may audit courses without charge on a space available basis.

TUITION

STUDENTS CARRYING 12 OR MORE CREDIT HOURS—considered full-time students.

For New York State residents	
With residency certificate	$365 per semester
Without residency certificate	$730 per semester
For out-of-state residents	$730 per semester

STUDENTS CARRYING LESS THAN 12 CREDIT HOURS—considered part-time students.

For New York State residents	
With residency certificate	$29 per credit hour
Without residency certificate	$58 per credit hour
For out-of-state residents	$58 per credit hour

TUITION REFUND POLICY ON PAGE 11 OF CATALOG.

Mid-Term Grades

Only the D, I, F and U grades will be reported to students and their advisers at mid-term.

Repeating Courses

If a course is repeated, the higher grade will enter the grade point average. If a required course is failed, the department or the dean may allow the student to substitute an equivalent or similar course, rather than repeat the failed course. In such cases the higher grade will enter the grade point average.

Grade Point Average

Each grade carries a specified number of honor points—4 for an A, 3 for a B, 2 for a C, 1 for a D. To determine one's grade point average, multiply the number of honor points earned, according to the letter grade, by the number of credits for the course. Add these together and divide this sum by the total number of credits taken.

Only those courses required in a program or electives needed for the degree will enter into the grade point average.

(OVER)

COMMUNITY COLLEGE
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BROOME